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SUMMER SESSION, 1893.

On Monday, 1st May, the Lectures were commenced.

ANATOMY, Practical Anatomy, Course of Demonstrations,	9 a.m. till 5 p.m. 9 a.m. & 11 a.m.	Dr J. Symington (Minto House, Chambers St.).
ANATOMY, Practical Anatomy, Course of Demonstrations,	9 a.m. till 5 p.m. 9 a.m. and 11 a.m.	Mr Macdonald Brown (Surgeons' Hall).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Dr Stevenson Macadam (Surgeons' Hall).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Mr J. Falconer King (Minto Ho., Chambers St.).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Mr Ivison Macadam (Surgeons' Hall).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Mr J. Rymer Paterson (11 Chambers Street).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m till 5 p.m.	Dr A. P. Aitken (Royal Vet. Col., 8 Clyde Street).
CHEMISTRY, Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Dr Readman (4 Lindsay Place, Geo. IV. Bridge).
MATERIA MEDICA AND THERAPEUTICS, PRACTICAL MATERIA MEDICA including Practical Pharmacy,	9 a.m. 10 a.m. & 2 p.m.,	Dr William Craig (Surgeons' Hall).
MATERIA MEDICA AND THERAPEUTICS, PRACTICAL MATERIA MEDICA including Practical Pharmacy,	9 a.m. 10 a.m.	Dr Ralph Stockman (Minto House, Chambers Street).
PRACTICAL PATHOLOGY,	8, 9, and 10 a.m.	Dr Alexander Bruce (Surgeons' Hall).
PRACTICAL PATHOLOGY,	9, 10, and 11 a.m.,	Dr William Russell.
PRACTICAL PATHOLOGY AND MORBID ANATOMY,	8, 9, and 10 a.m.,	Dr R. F. C. Leith (Minto House, Chambers St.)
PRACTICAL PHYSIOLOGY,	9 a.m., and other hours.	Dr Noël Paton (Surgeons' Hall).
MIDWIFERY AND DISEASES OF WOMEN,	9 a.m.	Dr Halliday Croom (Minto Ho., Chambers St).
MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN,	2 p.m.	Dr David Berry Hart (Surgeons' Hall).
MIDWIFERY AND DISEASES OF WOMEN,	2 p.m.	Dr Barbour (Park Place).
MIDWIFERY AND DISEASES OF WOMEN,	2 p.m.	Dr Haig Ferguson (41 Chambers Street).
MEDICAL JURISPRUDENCE AND PUBLIC HEALTH,	10 a.m.	Dr Littlejohn (Surg. Hall).
ROYAL INFIRMARY,	12 noon.	
CLINICAL MEDICINE (Tues. and Frid.).	12 noon.	Drs Wyllie, Affleck, Smart, and James. Dr Halliday Croom (*For Diseases of Women*) (Royal Infirmary).
CLINICAL MEDICINE, Tutorial Class for Physical Diagnosis,		Under the Superintendence of the Lecturers.
CLINICAL SURGERY (Mon. & Thurs.),	12 noon.	Mr Duncan, Mr A. G. Miller, Dr MacGillivray, and Dr P. H. Maclaren (Royal Infirmary).

School of Medicine—Summer Session—*continued.*

Clinical Surgery, Tutorial Classes for Practical Surgery.		Under the Superintendence of the Lecturers.
Botany,	9 a.m.	Mr A. N. M'Alpine (Minto House, Chambers St.).
Practical Botany,	10 a.m.	
Biology,	11 a.m.	Mr J. Arthur Thomson and Mr Robt. Turnbull (Surgeons' Hall.)
Physics,	12 noon.	Dr Dawson Turner (Surgeons' Hall).
Natural History, Course of Lectures,	1 p.m.	Mr J. Arthur Thomson (Park Place).
Natural History, Practical Class and Laboratory Work,		
Insanity (Tuesdays and Fridays), with practical instruction in Asylum Wards,	2 p.m.	Dr J. Batty Tuke (Surgeons' Hall).
Laryngology and Medical Ophthalmology, and the Uses of Electricity in Medical Treatment and Diagnosis,	9 a.m.	Dr John Wyllie (27 Nicolson Square).
Practical Medicine and Physical Diagnosis,	9 a.m.	Dr James (31 Chambers St.).
Practice of Medicine,	9 a.m.	Dr Byrom Bramwell (Park Pl.).
Practice of Medicine, with Clinical Demonstrations,	9 a.m.	Dr R. W. Philip (Victoria Disp., 26 Lauriston Place).
Diseases of the Ear. Tues. and Fri. (with Clinical Instruction at Hospital, 6 Cambridge Street, Lothian Rd., Mon., Thurs., and Sat., 12 noon),	9 a.m.	Dr Kirk Duncanson (6 Cambridge Street).
Diseases of the Ear and Throat, Tuesdays and Fridays,	11 a.m. to 12 noon.	Dr M'Bride (Royal Infirmary).
Diseases of the Skin, Clinical Instruction on Wednesdays and Saturdays,	10 a.m.	Dr Allan Jamieson (Royal Infirmary).
Diseases of the Skin, Tues. and Fri. (with Clinical Instruction at Dispensary, 142 High Street, Mon. and Thur. from 1 to 2 p.m.),	4 p.m.	Dr Stewart Stirling (Surgeons' Hall).
Diseases of the Eye, daily (Clinical Instruction at Royal Infirmary and Edinburgh Eye Dispensary),	10 a.m.	Mr George Berry (Surgeons' Hall).
Vaccination, with special reference to Public Vaccination in England (Wed. and Sat.),	12 noon and 1 p.m.	Dr Husband (Royal Dispensary).
Vaccination, with special reference to Public Vaccination in England (Thursdays),	3 p.m.	Dr J. B. Buist (Western Dispensary).
Practice of Vaccination (Mondays),	4 p.m.	Dr J. B. Buist (Cowgate Dis.).
Operative Surgery & Surgical Anatomy,	8 a.m	Mr Chas. W. Cathcart (Minto Ho., Chambers St).
Operative Surgery & Surgical Anatomy,	4 p.m.	Mr Francis M. Caird (Park Pl.).
Operative Surgery & Surgical Anatomy, began on Mon., 10th April, at 9 a.m., until 1st May	8 a.m	Mr Hodsdon (Surgeons' Hall).
Operative Surgery & Surgical Anatomy,	9 a.m.	Mr Shaw M'Laren (27 Nicolson Square).
Clinical Midwifery, at 9.30 a.m. daily, at Royal Maternity Hospital, during Autumn,		Dr Halliday Croom (Minto Ho., Chambers St.).
Systematic Gynæcology (Tuesdays and Fridays),	10 a.m.	Dr Brewis (27 Nicolson Sq.).
Clinical Gynæcology (Mondays and Thursdays),	4.30 p.m.	Dr Brewis (New Town Dis., and 6 Cambridge Street).
Systematic Gynæcology and Practical Midwifery	10 a.m.	Dr Haultain (Minto Ho., Chambers Street).
Diseases of Children (Clinical Instruction at Hospital on Wednesdays and Saturdays),	11.45 a.m. or hour to be arranged.	Mr Joseph Bell and Dr Burn Murdoch (Sick Children's Hospital).
Diseases of Infancy and Childhood, with Clinical Instruction in Sick Children's Hospital, on Mon. & Th. at 11 a.m.,	2 p.m.	Dr John Thomson (31 Chambers St.
Diseases of Infancy and Childhood (Course of 50 Lectures, including Clinical Demonstrations at the Cowgate Disp.),	3 p.m. daily	Dr J. W. Ballantyne (Minto House, Chambers St.).
Diseases of Children, Mondays and Thursdays (with Clinical Instruction in Sick Children's Hosp., Tue. & Fri., 11 a.m.)	10 a.m.	Dr Melville Dunlop (Oddfellows' Hall, Forrest Road).
Medical Electricity, including Electro-Physics, Diagnosis, and Therapeutics, commencing 5th May,	3 p.m.	Dr Dawson Turner (Surgeons' Hall).
Diseases of the Heart, with Clinical Teaching, Mondays and Thursdays,	4 p.m.	Dr G. A. Gibson (Minto House, Chambers Street).
Diseases of the Chest, Clinical Course, (Mondays and Fridays),	4 to 5.30 p.m.	Dr R. W. Philip (Consump. Disp., 26 Lauriston Place).
Diseases of the Tropics and Climatology (Mondays, Wednesdays, and Fridays),	5 p.m.	Dr R. W. Felkin (Park Place).

School of Medicine—Summer Session—*continued.*

Special Classes for Women.

Practical Anatomy,	9 a.m. till 5 p.m.	Mr Duncan Longden (30 Chambers Street).
Practical Chemistry,	2 p.m.	Mr Ivison Macadam (30 Chambers Street).
Practical Chemistry,	9 30 a.m.	Dr A. P. Aitken (Surgeon Sq.).
Practical Materia Medica, including Practical Pharmacy,		Dr W. Craig (30 Chambers Street).
Operative Surgery and Surgical Anatomy,		Mr Hodsdon (30 Chambers Street).
Materia Medica and Therapeutics,		Dr Ralph Stockman (Surgeon Sq.).
Midwifery and Diseases of Women,	11 a.m.	Dr Sophia Jex-Blake (Surgeon Square).
Midwifery and Diseases of Women,		Dr J. W. Ballantyne (30 Chambers Street).
Medical Jurisprudence and Public Health,	12 noon.	Dr Littlejohn (Surgeon Sq. and 30 Chambers St.).
Clinical Medicine & Clinical Surgery,	12 noon.	Royal Infirmary.
Leith Hospital,	3 to 5 p.m.	Dr Finlay (Leith Hospital).
Practical Physiology and Histology,	12 noon.	Dr Noël Paton (Surgeons Hall).
Practical Pathology,		Dr William Russell (30 Chambers St.).
Botany,	9 a.m.	Mr Robert Turnbull (30 Chambers Street).
Practical Botany,	10 a.m.	
Natural History, Lectures, Practical Class, and Demonstrations,		Mr J. Arthur Thomson (Park Place).
Biology,		Mr J. Arthur Thomson & Mr Turnbull (30 Chambers St).
Physics,	12 noon.	Dr Dawson Turner (Surg. Hall).
Diseases of Children, Clinical Instruction and Lectures,	At hours to be arranged.	Mr Joseph Bell and Dr Burn Murdoch (Sick Child. Hosp.)
Diseases of Children, Clinical Instruction at Disp., Lauriston Lane, on Weds. and Sats.	11 a.m.	Dr Cumming (30 Chambers Street and Surgeon Square).
Ophthalmology,		Mr George A. Berry (Surgeon Sq. and 30 Chambers St.).
Insanity,		Dr J. Batty Tuke (30 Chambers St.).
Practical Gynæcology,		Dr Brewis (30 Chambers Street).

WINTER SESSION, 1893-94.

On Monday, 2nd October, the Practical Anatomy Rooms and Chemical Laboratories will be opened. *On Tuesday, 10th October*, the Lectures will be commenced.

Anatomy,	Practical Anatomy,	9 a.m. till 5 p.m.	Dr J. Symington (Minto House, Chambers St.).
	Course of Lectures,	1 p.m.	
	Course of Demonstrations,	4 p.m.	
Anatomy,	Practical Anatomy,	9 a.m. till 5 p.m.	Mr Macdonald Brown (Surgeons' Hall).
	Course of Lectures,	9 a.m.	
	Course of Demonstrations,	4 p.m.	
Chemistry,	Lectures,	10 a.m.	Dr Stevenson Macadam (Surgeons' Hall).
	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	
Chemistry,	Lectures,	10 a.m.	Mr J. Falconer King (Minto Ho., Chambers St.).
	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	
Chemistry,	Lectures,	9 a.m.	Mr Ivison Macadam (New Veterinary College, Leith Wk., and Surgeons' Hall).
	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	
Chemistry,	Lectures,	10 a.m.	Mr J. Rymer Paterson (11 Chambers Street).
	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	
Chemistry,	Lectures,	10 a.m.	Dr A. P. Aitken (Royal Veterinary College, 8 Clyde Street).
	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	
Chemistry,	Practical Chemistry, Analytical Chemistry,	9 a.m. till 5 p.m.	Dr Readman (4 Lindsay Pl., George IV. Bridge).
Practice of Physic,		9 a.m.	Dr John Wyllie (27 Nicolson Square).
Practice of Physic,		9 a.m.	Dr James (31 Chambers Street).
Practice of Physic,		9 a.m.	Dr J. O. Affleck (Surgeons' Hall).
Practice of Physic,		9 a.m.	Dr Byrom Bramwell (Park Place).
Practice of Physic,		9 a.m.	Dr G. A. Gibson (Minto Ho., Chambers St.).
Practice of Physic, with Clinical Demonstrations,		9 a.m.	Dr R. W. Philip (26 Lauriston Place).

School of Medicine—Winter Session—*continued.*

Surgery,	10 a.m.	Mr Charles W. Cathcart (Minto House, Chambers Street).
Surgery,	10 a.m.	Mr Francis M. Caird (Park Pl.).
Surgery,	2 p.m.	Mr Hodsdon (Surgeons' Hall).
Surgery,	2 p.m.	Mr Shaw M'Laren (27 Nicolson Square).
Midwifery and Diseases of Women and Children,	11 a.m.	Dr Milne Murray (Park Place).
Midwifery and Diseases of Women,	11 a.m.	Dr Matheson (Marshall Street).
Midwifery and Diseases of Women and Children,	10 a.m	Dr Haultain (Minto House, Chambers Street).
Institutes of Medicine,	11 a.m.	Dr Noël Paton Surgeons' Hall).
Practical Physiology,	at suitable hours.	
Royal Infirmary,	12 noon	
Clinical Medicine (Tues. and Fri.),	12 noon	Drs Wyllie, Affleck, Smart, and James. Dr Halliday Croom (*For Diseases of Women*). (Royal Infirmary).
Clinical Medicine, Tutorial Class for Physical Diagnosis,		Under the Superintendence of the Lecturers.
Clinical Surgery (Mon. and Thur.),	12 noon.	Mr Duncan, Mr A. G. Miller, Dr MacGillivray, and Dr P. H. Maclaren (Royal Infirmary).
Clinical Surgery, Tutorial Classes for Practical Surgery,		Under the Superintendence of the Lecturers.
Materia Medica and Therapeutics,	2 p.m.	Dr William Craig (Surgeons' Hall).
Practical Materia Medica, including Practical Pharmacy,	9 a.m. and 3 p.m.	
Materia Medica and Therapeutics,	2 p.m.	Dr Ralph Stockman (Minto Ho., Chambers Street).
Medical Jurisprudence & Public Health,	3 p.m.	Dr Littlejohn (Surgeons' Hall).
General Pathology,	3 p.m.	Dr Alex. Bruce (Surgeons' Hall).
Practical Pathology,	9 a.m.	
General Pathology and Morbid Anatomy,	3 p.m.	Dr Wm. Russell.
Practical Pathology,	9 a.m.	
General Pathology and Morbid Anatomy,	3 p.m.	Dr R. F. C. Leith (Minto House, Chambers Street).
Practical Pathology and Morbid Anatomy,	9 a.m.	
Botany,	9 a.m.	Mr A. N. M'Alpine (Minto Ho., Chambers Street).
Practical Botany,	10 a.m.	
Physics,	11 a.m.	Dr Dawson Turner (Surg. Hall).
Natural History, Course of Lectures, Practical Class and Laboratory Work,	1 p.m.	Mr J. Arthur Thomson (Park Place).
Biology,	3 p.m.	Mr J. Arthur Thomson and Mr Turnbull (Surgeons' Hall).
Diseases of the Ear, Tuesdays and Frids. (with Clinical Instruction at Hospital, 6 Cambridge St., Lothian Rd., Mon., Thurs., and Sat., 12 noon), commencing 15 Nov.,	9 a.m.	Dr Kirk Duncanson (6 Cambridge Street).
Diseases of the Ear and Throat, Tuesdays and Fridays,	11 a.m.	Dr P. M'Bride (Royal Infirmary).
Diseases of the Eye, 30 Lectures, beginning in November,		Mr George Berry (Edinburgh Eye Dispensary).
Diseases of the Skin, Clinical Instruction on Weds. and Sats.,	10 a.m.	Dr Allan Jamieson (Royal Infirmary).
Diseases of the Skin, Clinical Instruction at the Disp. on Mon.&Thurs.	1 p.m.	Dr Stewart Stirling (Skin Dispensary, 142 High Street).
Diseases of the Chest, Clinical Course (Mondays and Fridays),	4 to 5.30 p.m.	Dr R. W. Philip (Consumption Dispensary, 26 Lauriston Place).
Diseases of Children, Clinical Instruction and Lectures on Wed. and Sat. 3 Months' Course, com. Nov.	11.45 a.m. or hour to be arranged.	Mr Joseph Bell and Dr Burn Murdoch (Sick Children's Hos.).
Diseases of Infancy and Childhood, Lectures twice a week, beginning Jan.,	11 a.m. & 3 p.m.	Dr John Thomson (31 Chambers St. and Sick Children's Hospital).
Diseases of Infancy and Childhood (Course of 50 Lectures, including Clinical Demonstrations at Cowgate Disp.),	3 p.m. daily.	Dr J. W. Ballantyne (Minto Ho., Chambers Street.
Diseases of Children, with Clinical Instruction at Sick Children's Hospital Waiting Rooms	3 p.m.	Dr Melville Dunlop (Oddfellows' Hall, Forrest Road, & Children's Hospital).

School of Medicine—Winter Session—*continued*.

	Vaccination, with special reference to Public Vaccination in England (Wednesdays and Saturdays),	12 noon and 1 p.m.	Dr Husband (Royal Dispensary).
	Vaccination, with special reference to Public Vaccination in England (Thursdays),	3 p.m.	Dr J. B. Buist (West. Dispensary).
	Practice of Vaccination, Mondays,	4 p.m.	Dr J. B. Buist (Cowgate Dispensary).
	Systematic Gynæcology,	5 p.m.	Dr Halliday Croom (Minto Ho., Chambers Street).
	Clinical Midwifery (daily at suitable hours, February to May),		Dr Berry Hart (Royal Maternity Hospital).
	Clinical Gynæcology, Mondays and Thursdays,	4.30 p.m.	Dr Brewis (New Town Dispensary and 6 Cambridge Street).
	Diseases of the Tropics and Climatology (Mon., Wed., and Fri.),	5 p.m.	Dr R. W. Felkin (Park Place).
Special Classes for Women.	Practical Anatomy, Lectures and Demonstrations,	9 a.m. to 5 p.m. 9 a.m.	Mr Duncan Longden (30 Chambers Street).
	Chemistry—Lectures,	11 a.m.	Mr Ivison Macadam (30 Chambers Street).
	Chemistry—Lectures,	11 a.m.	Dr A. P. Aitken (Surgeon Square).
	Practice of Physic,		Dr James (Surgeon Square).
	Practice of Physic,		Dr R. W. Philip (30 Chambers Street).
	Surgery,		Mr Hodsdon (30 Chambers Street).
	Surgery,	10 a.m.	Mr Shaw M'Laren (Surgeon Sq.).
	Institutes of Medicine, Practical Physiology,		Dr Noël Paton (Surgeons' Hall).
	Practical Pathology,	11 a.m.	Dr Alex. Bruce (Surgeons' Hall).
	Materia Medica and Therapeutics,		Dr William Craig (30 Chambers Street).
	Clinical Medicine and Clinical Surgery	12 noon	Royal Infirmary.
	Clinical Surgery, (Mon. and Thurs.),	3 p.m.	Dr W. Finlay (Leith Hospital).
	Natural History, Lectures, Practical Class, and Demonstrations,		Mr J. Arthur Thomson (Park Pl.).
	Physics,	11 a.m.	Dr Dawson Turner (30 Chambers Street).
	Biology,	3 p.m.	Mr J. Arthur Thomson and Mr Turnbull (30 Chambers Street).
	Diseases of Children, Clinical Instruction and Lectures,	at hours to be arranged.	Mr Joseph Bell and Dr Burn Murdoch (Sick Children's Hospital).
	Diseases of Children, Clinical Instruction at Disp., Lauriston Lane, on Weds. and Sats.,	11 a.m.	Dr Cumming (30 Chambers Street and Surgeon Square).
	Vaccination,		Dr Husband (Surgeon Square).
	Diseases of the Tropics and Climatology,		Dr R. W. Felkin (30 Chambers Street).
	Practical Gynæcology,		Dr Brewis (6 Cambridge Street).

Fees.—For a *First* Course of Lectures, Royal Colleges, &c., £3, 5s.; University of Edinburgh, £4, 4s.; for a *Second*, £2, 4s.; *Perpetual*, £5, 5s.—To those who have already attended a *First* Course in Edinburgh the *Perpetual* Fee is £2, 4s. Practical Anatomy (Six Months' Course), £3, 3s.; Course of Demonstrations, £2, 2s.; *Perpetual*, £4, 4s. Practical Anatomy, with Course of Demonstrations, £4, 4s., Practical Chemistry, £3, 3s.; Analytical Chemistry, £2 a Month, £5 for Three Months, or £10 for Six Months. Practical Materia Medica, including Practical Pharmacy, Practical Pathology, Practical Physiology, Biology, Physics, Operative Surgery, and Practical Medicine and Medical Diagnosis, *each* £3, 3s.; Diseases of the Ear, Skin, Eye, Children, Chest, and Tropics and Climatology, *each* £2, 2s. Vaccination and Insanity, £1, 1s. For *SUMMER COURSES* of Clinical Surgery and Clinical Medicine, *each* £2, 4s.; Practical Anatomy, including Anatomical Demonstrations, £2, 2s.

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Details of the system will be found in prospectus of the College (see page 2 and following pages).

Note.—All the questions set at the last Six Examinations, unless unsuitable, are incorporated in the Tutors' papers.

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THE

EDINBURGH UNIVERSITY CALENDAR

1893-94.

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PREFACE.

THE EDINBURGH UNIVERSITY CALENDAR, *published annually in May by authority of the Senatus Academicus, contains Synopses of the Courses of Lectures delivered by the Professors and Lecturers; the Class Prize Lists; the Regulations and Subjects of Examination for Degrees in Arts, Divinity, Law, Medicine, and Science; the Questions proposed to Candidates for Degrees, &c.; the Annual Graduation Lists; the Bursaries, Scholarships, Fellowships, and other Endowments of the University; Benefactions*[1] *to the University; the Regulations for the Schoolmaster's Diploma and for the Certificate of Literate in Arts; the Regulations for University Certificates in Arts for Women; and a statement of the Annual Income and Expenditure of the University.*

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[1] A full list of the chief Benefactors, with the purposes of their benefactions, is given at pages 621-630.

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UNIVERSITY OF EDINBURGH,
25*th May* 1893.

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The Calendar.

1893—MAY, 31 DAYS.

1	M	*Clinical Surgery Exams. begin.*
2	Tu	SUMMER SESSION OPENS. *Clinical Medicine Exams. begin.*
3	W	
4	Th	
5	Fr	
6	Sa	
7	S	
8	M	
9	Tu	
10	W	
11	Th	
12	Fr	LAW CLASSES OPEN. Court of Session sits.
13	Sa	
14	S	
15	M	Whitsunday Term. *Meeting of University Court at* 4 P.M.
16	Tu	
17	W	*Fellowships, Scholarships, Bursaries, paid by Factor.* HOLIDAY. General Assembly meets.
18	Th	
19	Fr	
20	Sa	
21	S	
22	M	
23	Tu	
24	W	Queen Victoria born, 1819.
25	Th	
26	Fr	*Meeting of Senatus Academicus at* 3 P.M.
27	Sa	
28	S	
29	M	
30	Tu	
31	W	

1893—JUNE, 30 DAYS.

1	Th	
2	Fr	
3	Sa	
4	S	
5	M	
6	Tu	*University Local Examinations begin.*
7	W	
8	Th	
9	Fr	
10	Sa	
11	S	
12	M	*Meeting of University Court at* 4 P.M. *Final Prof. Exam. in Med.—Prac. of Phys.*, 10; *Med. Jur.*, 1.
13	Tu	*Final Prof. Exam. in Med.—Surg.* 10; *Midwif.* 1; *Prescriptions*, 3.30.
14	W	*Final Prof. Oral Exams. begin.*
15	Th	
16	Fr	
17	Sa	
18	S	
19	M	
20	Tu	*Accession of the Queen*, 1837.
21	W	
22	Th	
23	Fr	
24	Sa	Midsummer Day.
25	S	
26	M	*Candidates for Law, Arts, and Science (Public Health) Graduation Examinations to intimate their names, show Certificates, and pay Fees.*
27	Tu	
28	W	*Queen's Coronation*, 1838.
29	Th	
30	Fr	*Meeting of Senatus Academicus at* 3 P.M.

1893—JULY, 31 DAYS.

1	Sa	
2	S	
3	M	*Examinations for Degrees in Arts and in Law and for Second B.Sc. in Public Health begin.* (See Time-Tables, pages 124, 353, and 582).
4	Tu	
5	W	
6	Th	
7	Fr	
8	Sa	*Last day for Names of Candidates for First Professional Examination in Medicine, for Examinations in Science, and for M.A. to be given in, Certificates shown, and Fees paid.*
9	S	
10	M	*Names of Candidates for Second Professional Examination to be given in, Certificates shown, and Fees paid.*
11	Tu	
12	W	
13	Th	
14	Fr	
15	Sa	*Last day for payment of Stamp Duty for M.D. Diplomas. Prac. Chem. Exam., for First Prof., First B.Sc., and for M.A. begins.*
16	S	
17	M	*Meeting of University Court at* 4 P.M. *First Prof. in Med., First and Second B.Sc., and M.A. Exams. begin.* See Time-Table, pages 124, 436, and 581.
18	Tu	
19	W	*Second Professional Examinations in Medicine begin.* See Time-Table, page 436.
20	Th	SUMMER SESSION ENDS.
21	Fr	
22	Sa	
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	Fr	*Meeting of Senatus Academicus at* 3 P.M. (1) *Candidates for Degrees to be reported and approved;* (2) *Class Lists and Returns for Court, &c., to be given in.*
29	Sa	
30	S	
31	M	

1893—AUGUST, 31 DAYS.

1	Tu	GRADUATION CEREMONIAL IN LAW, MEDICINE, AND SCIENCE AT 10 A.M. Lammas Day. *Library open from* 10 A.M *to* 1 P.M. *till Friday, 1st September. Closed on Saturdays. Reading Room, New Buildings, closed during same period. University Offices open from* 10 *to* 1 *till 2nd Oct. Closed on Saturdays.*
2	W	
3	Th	
4	Fr	
5	Sa	
6	S	
7	M	
8	Tu	
9	W	
10	Th	
11	Fr	
12	Sa	
13	S	
14	M	
15	Tu	
16	W	
17	Th	
18	Fr	
19	Sa	
20	S	
21	M	
22	Tu	
23	W	
24	Th	
25	Fr	
26	Sa	
27	S	
28	M	
29	Tu	
30	W	
31	Th	

1893—SEPTEMBER, 30 DAYS.

1	Fr	*Reading Room in University New Buildings open from* 10 *to* 1 *till 2nd October. Closed on Saturdays.*
2	Sa	
3	S	
4	M	
5	Tu	
6	W	
7	Th	
8	Fr	
9	Sa	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	Fr	
16	Sa	
17	S	
18	M	Edinburgh Holiday.
19	Tu	
20	W	
21	Th	
22	Fr	*Last day for Names of Candidates for Preliminary Examinations for Degrees in Arts, Science, and Medicine, to be given in, and Fees paid. Last day for entering for University Bursaries in the Faculty of Arts.*
23	Sa	
24	S	
25	M	
26	Tu	
27	W	
28	Th	
29	Fr	
30	Sa	*Preliminary Examinations for Degrees in Arts and Science, and Bursary Examinations begin.* See Time-Table, pages 122 and 123.

1893—OCTOBER, 31 DAYS.

1	S	
2	M	ANNUS ACADEMICUS *begins. First day for payment of* MATRICULATION *fee. Practical Anatomy, and Public Health Laboratory Courses begin. Annual Inspection of Library. All Books to be returned before this date. Library closed for lending till 9th. Preliminary Examinations for Degrees in Medicine begin.*
3	Tu	*Last day for Names of Candidates for Degrees in Arts and Science, for B.L. Preliminary, for L.A. Certificates, and for Certificates for Women, to be given in, Certificates shown, and Fees paid.*
4	W	
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	CLASSES IN FACULTY OF MEDICINE OPEN. *Examinations for M.A., L.A., Certificates for Women, B.L. Preliminary and B.Sc. begin.* See Time-Table, pages 124, 353, and 581.
11	W	
12	Th	
13	Fr	
14	Sa	

1893—**OCTOBER**—*continued.*

15	S	
16	M	*Meeting of University Court at* 4 P.M. *Last day for entering Names for Second and Third Year Grierson Bursaries in Law.*
17	Tu	CLASSES IN FACULTIES OF ARTS AND LAW OPEN.
18	W	
19	Th	*Last day for Names of Candidates for B.D. to be given in, Certificates shown, and Fees paid.*
20	Fr	
21	Sa	*Meeting of Senatus Academicus at* 2 P.M.: (1) *Standing Committees to be appointed;* (2) *Names of Professors' Assistants to be submitted for approval;* (3) *Annual Budget of Senatus to be arranged;* (4) *House Committee to submit Estimates for year.*
22	S	
23	M	*Last day for Names of Candidates for Degrees in Law to be given in, Certificates shown, and Fees paid.*
24	Tu	*Examinations for B.D. begin.* See Time-Table, page 300.
25	W	
26	Th	
27	Fr	*Meeting of General Council, at* 3 *o'clock. Names of Candidates for 2nd B.Sc. in Engineering to be given in, Certificates shown, and Fees paid.*
28	Sa	
29	S	
30	M	*Examinations for Degrees in Law begin.* See Time-Table, page 353.
31	Tu	DIVINITY CLASSES OPEN, *with Introductory Address by Rev. Prof. Dobie, B.D., at* 12.

1893—NOVEMBER, 30 DAYS.

1	W	
2	Th	
3	Fr	
4	Sa	
5	S	
6	M	*Second B.Sc. in Engineering Examinations begin.* See Time-Table, page 582.
7	Tu	
8	W	
9	Th	
10	Fr	*Examinations for Divinity Bursaries begin.*
11	Sa	ELECTION OF RECTOR. Martinmas Term.
12	S	
13	M	*Meeting of University Court at* 4 P.M. *Appointment of Class Assistants to be submitted for approval.*
14	Tu	*Certificates for Bursaries in Arts granted by Dean. Fellowships, Scholarships, Bursaries paid by Factor.*
15	W	
16	Th	
17	Fr	
18	Sa	
19	S	
20	M	
21	Tu	
22	W	
23	Th	
24	Fr	
25	Sa	*Meeting of Senatus Academicus at* 2 P.M.
26	S	
27	M	
28	Tu	
29	W	
30	Th	*Registration of Members of General Council for Register of* 1894 *ends.*

1893—DECEMBER, 31 DAYS.

1	Fr	*Names of Candidates for Fellowships and Scholarships to be intimated.*
2	Sa	
3	S	
4	M	
5	Tu	
6	W	
7	Th	
8	Fr	
9	Sa	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	Fr	
16	Sa	*Meeting of Senatus at* 2 P.M.*:* (1) *Election of Managers for Royal Infirmary ;* (2) *Report to Widows' Fund.*
17	S	
18	M	*Meeting of University Court at* 4 P.M.
19	Tu	
20	W	
21	Th	*Examinations for Fellowships and Scholarships in Arts begin at* 10 *o'clock.*
22	Fr	*Classes meet for last time before Christmas Vacation.*
23	Sa	
24	S	
25	M	CHRISTMAS DAY.
26	Tu	*Library, Reading Room, New Buildings, and University Offices open from* 10 A.M. *to* 1 P.M. *till* 9*th January. Closed on Saturdays.*
27	W	
28	Th	
29	Fr	
30	Sa	
31	S	

1894—JANUARY, 31 DAYS.

1	M	
2	Tu	
3	W	
4	Th	
5	Fr	
6	Sa	
7	S	
8	M	
9	Tu	*Classes meet after Christmas Vacation.*
10	W	
11	Th	
12	Fr	
13	Sa	
14	S	
15	M	*Meeting of University Court at* 4 P.M. *Appointment of Examiners in Medicine and in Science.*
16	Tu	
17	W	
18	Th	
19	Fr	
20	Sa	
21	S	
22	M	*Meeting of University Court for hearing Registration Appeals, at* 4 P.M.
23	Tu	
24	W	
25	Th	
26	Fr	
27	Sa	*Meeting of Senatus Academicus at* 2 P.M.: (1) *Annual Reports on Museums and Univ. Library to be given in;* (2) *Names for Honorary Degrees to be proposed;* (3) *Arrangements for Summer and Winter Sessions,* 1894-95.
28	S	
29	M	
30	Tu	
31	W	

1894—FEBRUARY, 28 DAYS.

1	Th	
2	Fr	
3	Sa	
4	S	
5	M	
6	Tu	
7	W	
8	Th	
9	Fr	
10	Sa	
11	S	
12	M	*Meeting of University Court at* 4 P.M. *Holiday in Faculty of Arts.*
13	Tu	*Reid Commemoration Concert.*
14	W	
15	Th	
16	Fr	
17	Sa	
18	S	
19	M	
20	Tu	
21	W	
22	Th	
23	Fr	
24	Sa	*Meeting of Senatus Academicus at* 2 P.M.: (1) *Report on Honorary Degrees in Divinity and Law*; (2) *Resolution to Elect Member of General Assembly.*
25	S	
26	M	
27	Tu	
28	W	

1894—MARCH, 31 DAYS.

1	Th	
2	Fr	
3	Sa	
4	S	
5	M	
6	Tu	
7	W	
8	Th	
9	Fr	
10	Sa	
11	S	
12	M	*Meeting of University Court at* 4. P.M.
13	Tu	
14	W	
15	Th	
16	Fr	*Last day for Names of Candidates for Degrees in Arts, for Schoolmaster's Diploma, for Literate in Arts, for B.L. Preliminary, and Certificates to Women to be given in and Fees paid.*
17	Sa	
18	S	
19	M	*Last day for Names for First Professional Examination, and for Examinations for Degrees in Science to be given in, Certificates shown, and Fees paid.*

1894—MARCH—*continued.*

20	Tu	*Last day for Names for B.D. Examinations to be given in, Certificates shown, and Fees paid.* CLASSES IN FACULTY OF LAW CLOSE.
21	W	
22	Th	CLASSES IN FACULTY OF MEDICINE CLOSE. *Examinations for M.A. begin.* See Time-Table, pages 124 and 125.
23	Fr	GOOD FRIDAY.
24	Sa	*Practical Chemistry Exam. for Degrees in Arts, Medicine, and Science begin. Last day for Names for Second Prof. Exam. to be given in, Certificates shown, and Fees paid.*
25	S	EASTER SUNDAY.
26	M	*First Professional Examination, B.Sc. Examinations, and Science Subjects for M.A. begin.* See Time-Tables, pages 124, 125, 420, 436, and 581.
27	Tu	
28	W	
29	Th	
30	Fr	CLASSES IN THE FACULTY OF ARTS CLOSE. *Certificates for M.A. Exams. to be shown before* 4 *p.m. Second Professional Examinations begin.* See Time-Table, page 436.
31	Sa	*Second Professional Oral Exainations begin. Meeting of Senatus Academicus at* 2 P.M. : (1) *Member of Assembly to be elected;* (2) *Acceptances of Honorary Degrees;* (3) *Class Lists and Returns for University Court to be given in. Preliminary Exams. in Arts and Science begin.* See Time-Table, p. 123.

1894—APRIL, 30 DAYS.

1	S	
2	M	*Examinations for M.A. with Honours, for D.Sc. in Mental Science, and Preliminary Examination for Degrees in Medicine begin.* See Time-Tables, pages 123 and 125.
3	Tu	*Examinations for B.L. Preliminary begin.*
4	W	*B.D. Examinations, and Examinations for D.Sc. in Philology begin.* See Time-Table, page, 300.
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	*Last day for entering for Graduation on* 13*th.*
12	Th	
13	Fr	GRADUATION CEREMONIAL IN DIVINITY, LAW, ARTS, AND SCIENCE, AT 10 A.M. COMMEMORATION SERVICE IN ST GILES'S AT 12.
14	Sa	*University Offices open from* 10 *to* 1 *till* 1*st May. Closed on Saturdays.*

1894—APRIL—*continued.*

15	S	
16	M	*Meeting of University Court at* 4 P.M. Edinburgh holiday.
17	Tu	*Meeting of General Council at* 3 P.M. *Names of Candidates for Final Exam. in Medicine to be given in, Certificates shown, and Fees paid. University Library, and also the Reading Room in New Buildings, open from* 10 A.M. *to* 1 P.M. *till 23rd April. Closed on Saturdays.*
18	W	
19	Th	
20	Fr	
21	Sa	
22	S	
23	M	
24	Tu	
25	W	
26	Th	
27	Fr	
28	Sa	
29	S	
30	M	*Last day for giving in Theses and paying Fees for M.D., and for D.Sc.*

Calendar 1894-95.

MAY 1894.

S		6	13	20	27
M		7	14	21	28
Tu	1	8	15	22	29
W	2	9	16	23	30
Th	3	10	17	24	31
Fr	4	11	18	25	
Sa	5	12	19	26	

JUNE 1894.

S		3	10	17	24
M		4	11	18	25
Tu		5	12	19	26
W		6	13	20	27
Th		7	14	21	28
Fr	1	8	15	22	29
Sa	2	9	16	23	30

JULY 1894.

S	1	8	15	22	29
M	2	9	16	23	30
Tu	3	10	17	24	31
W	4	11	18	25	
Th	5	12	19	26	
Fr	6	13	20	27	
Sa	7	14	21	28	

AUGUST 1894.

S		5	12	19	26
M		6	13	20	27
Tu		7	14	21	28
W	1	8	15	22	29
Th	2	9	16	23	30
Fr	3	10	17	24	31
Sa	4	11	18	25	

SEPTEMBER 1894.

S		2	9	16	23	30
M		3	10	17[1]	24	
Tu		4	11	18	25	
W		5	12	19	26	
Th		6	13	20	27	
Fr		7	14	21	28	
Sa	1	8	15	22	29	

OCTOBER 1894.

S		7	14	21	28
M	1	8	15	22	29
Tu	2	9	16	23	30
W	3	10	17	24	31
Th	4	11	18	25	
Fr	5	12	19	26	
Sa	6	13	20	27	

NOVEMBER 1894.

S		4	11	18	25
M		5	12	19	26
Tu		6	13	20	27
W		7	14	21	28
Th	1	8	15	22	29
Fr	2	9	16	23	30
Sa	3	10	17	24	

DECEMBER 1894.

S		2	9	16	23	30
M		3	10	17	24	31
Tu		4	11	18	25[2]	
W		5	12	19	26	
Th		6	13	20	27	
Fr		7	14	21	28	
Sa	1	8	15	22	29	

JANUARY 1895.

S		6	13	20	27
M		7	14	21	28
Tu	1	8	15	22	29
W	2	9	16	23	30
Th	3	10	17	24	31
Fr	4	11	18	25	
Sa	5	12	19	26	

FEBRUARY 1895.

S		3	10	17	24
M		4	11[3]	18	25
Tu		5	12	19	26
W		6	13[4]	20	27
Th		7	14	21	28
Fr	1	8	15	22	
Sa	2	9	16	23	

MARCH 1895.

S		3	10	17	24	31
M		4	11	18	25	
Tu		5	12	19	26	
W		6	13	20	27	
Th		7	14	21	28	
Fr	1	8	15	22	29	
Sa	2	9	16	23	30	

APRIL 1895.

S		7	14	21	28
M	1	8	15[1]	22	29
Tu	2	9	16	23	30
W	3	10	17	24	
Th	4	11	18	25	
Fr	5	12[5]	19	26	
Sa	6	13	20	27	

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[1] Edinburgh Holiday. [2] Christmas Day. [3] Holiday in Faculty of Arts. [4] Reid Concert. [5] Good Friday.

ADDRESSES OF THE PRINCIPAL AND PROFESSORS.

Principal Sir William Muir, Dean Park House.
Professor Goodhart, 2 Drumsheugh Gardens.
„ Butcher, 27 Palmerston Place.
„ Chrystal, 5 Belgrave Crescent.
„ Seth, 16 Church Hill.
„ Calderwood, Craigrowan, Napier Road, Merchiston.
„ Tait, 38 George Square.
„ Masson, The University.
„ Copeland, 15 Royal Terrace.
„ Wallace, The University.
„ Niecks, Music Class Room, Park Place.
„ Eggeling, 15 Hatton Place, Grange.
„ Armstrong, The University.
„ Geikie, 31 Merchiston Avenue.
„ Nicholson, Eden Lodge, Newbattle Terrace, Morningside.
„ Laurie, Nairne Lodge, Duddingston.
„ Baldwin Brown, 3 Rosebery Crescent.
„ Mackinnon, 1 Merchiston Place.
Rev. Professor Flint, Johnstone Lodge, Craigmillar Park.
„ Dobie, 58 George Square.
„ Taylor, 6 Greenhill Park.
„ Charteris, Cameron House, Dalkeith Road.
Professor Sir Ludovic Grant, Bart., 29 India Street.
„ Goudy, 2 Drummond Place.
„ Kirkpatrick, 5 Murrayfield.
„ Rankine, 23 Ainslie Place.
„ Sir Douglas Maclagan, 28 Heriot Row.
„ Wood, 16 Buckingham Terrace.
„ Bayley Balfour, Inverleith House.
„ Rutherford, 14 Douglas Crescent.
„ Grainger Stewart, 19 Charlotte Square.
„ Sir Wm. Turner, 6 Eton Terrace.
„ Crum Brown, 8 Belgrave Crescent.

Professor Simpson, 52 Queen Street.
„ Cossar Ewart, 2 Belford Park.
„ Fraser, 13 Drumsheugh Gardens.
„ Annandale, 34 Charlotte Square.
„ Chiene, 26 Charlotte Square.
„ Greenfield, 7 Heriot Row.

PROFESSORS EMERITI.

George James Allman, LL.D., M.D., formerly Professor of Natural History; Ardmore, Parkstone, Dorset.

John Stuart Blackie, formerly Professor of Greek; 9 Douglas Crescent.

Alexander Campbell Fraser, D.C.L., LL.D., formerly Professor of Logic and Metaphysics; Gorton, Hawthornden, Midlothian.

Norman Macpherson, LL.D., formerly Professor of Scots Law; 6 Buckingham Terrace.

Sir Herbert Stanley Oakeley, D.C.L., LL.D., Mus. D., formerly Professor of Music; 16 Suffolk Street, London, S.W.

Charles Piazzi Smyth, LL.D., formerly Professor of Practical Astronomy; Clova, Ripon.

PROFESSORS RESIGNED.

Theodor Aufrecht, M.A., Ph.D., formerly Professor of Sanskrit; The University, Bonn.

Sir Archibald Geikie, LL.D., formerly Professor of Geology; Museum of Geology, Jermyn Street, London.

Sir Joseph Lister, Bart., LL.D., M.D., formerly Professor of Clinical Surgery; 12 Park Crescent, Portland Place, London.

Æneas James George Mackay, LL.D., Sheriff of Fife, Advocate, formerly Professor of History; 7 Albyn Place, Edinburgh.

Right Hon. Lord Playfair, LL.D., formerly Professor of Chemistry; 68 Onslow Gardens, South Kensington, London.

Robert Wallace, D.D., M.P., formerly Professor of Church History; 50 Finborough Road, London, S.W.

University Officers.

Date of Institution. Appointed

Chancellor.

1859. RIGHT HON. ARTHUR JAMES BALFOUR, M.P., D.C.L., LL.D. 1891

Vice-Chancellor.

1859. SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D. 1885

Rector.

1859. THE RIGHT HON. GEORGE JOACHIM GOSCHEN, M.P., LL.D. 1890

Principal.

1582. SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D. 1885

Representative in Parliament.

1868. RIGHT HON. SIR CHARLES JOHN PEARSON, Q.C. 1890

University Court.

President—THE RECTOR.

THE PRINCIPAL	*Ex officio.*	
THE LORD PROVOST OF EDINBURGH	*Ex officio.*	
ÆNEAS J. G. MACKAY, LL.D., Advocate	Assessor, nominated by Chancellor	1891
THE HON. LORD STORMONTH DARLING	Do. nominated by Rector	1887 & 1891
JAMES COLSTON	Do. elected by Town Council	1886
PATRICK HERON WATSON, M.D., LL.D.	Do. elected by General Council	1887
THE RIGHT HON. JOHN H. A. MACDONALD, C.B., LL.D., Lord Justice-Clerk	Do. do. do.	1889
JOHN DUNCAN, M.D.	Do. do. do.	1889
THOMAS M'KIE, Advocate	Do. do. do.	1889
SIR WILLIAM TURNER, M.B., D.C.L., LL.D., Professor of Anatomy	Do. elected by Senatus	1889

		Appointed.
ALEXANDER CRUM BROWN, M.D., D.Sc., Professor of Chemistry	Assessor, elected by Senatus	1889
SAMUEL HENRY BUTCHER, LL.D., Litt.D., Professor of Greek...	Do. do. do.	1891
HENRY CALDERWOOD, LL.D., Professor of Moral Philosophy	Do. do. do.	1892

Secretary—Professor TAYLOR, D.D.
Factor and Law Agent—Henry Cook, W.S.
Auditor—Thomas Goldie Dickson, C.A.
Clerk—Thomas Gilbert.
Assistant Clerk—James Dowie.
Secretary's Clerk—George Campbell.

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Curators of Patronage.

PRINCIPAL SIR WILLIAM MUIR	Elected by University Court	1887
Right Hon. J. H. A. MACDONALD, C.B., LL.D., Lord Justice-Clerk	Elected by do. ...	1890
PATRICK HERON WATSON, M.D., LL.D.	Elected by do.	1891
Right Hon. JAMES ALEXANDER RUSSELL, Lord Provost	Elected by Town Council	1891
JOHN CLAPPERTON	Elected by do.	1885
Sir THOS. CLARK, Bart.	Elected by do.	1886
GEO. AULDJO JAMIESON, C.A...	Elected by do.	1892

Secretary—R. HERBERT JOHNSTON, W.S., 66 Frederick Street.

——o——

Senatus Academicus.

President—The Principal. **Secretary**—Professor Kirkpatrick.

FACULTY OF ARTS.

Dean—George Chrystal, LL.D., Professor of Mathematics.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1583	**Humanity**..................	Harry Chester Goodhart, M.A.	1891	Lds. of Ses., Cur., Fac. of Adv., and W.S. Soc.[1]
1583	**Greek**.........................	Samuel Henry Butcher, LL.D., Litt.D.	1882	Curators.
1583	**Mathematics**..............	Geo. Chrystal, LL.D...	1879	Curators.
1583	**Logic & Metaphysics**.	Andrew Seth, LL.D..	1891	Curators.
1583	**Moral Philosophy**......	Henry Calderwood, LL.D.	1868	Curators.
1583	**Natural Philosophy**...	Peter Guthrie Tait, M.A., D.Sc.	1860	Curators.
1760	**Rhetoric and English Literature**	David Masson, LL.D...	1865	Crown.
1719	**History**	John Kirkpatrick, LL.B., LL.D.	1881	Fac. of Adv., & Cur.
1786	**Practical Astronomy**	Ralph Copeland, Ph.D.	1889	Crown.

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[1] The Judges of the Court of Session nominate two Delegates, the Curators two, the Faculty of Advocates one, and the Society of Writers to the Signet one. These Delegates appoint the Professor, who receives his Commission from the Curators.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1790	**Agriculture & Rural Economy**	Robert Wallace	1885	Lds.of Sess., Cur. & Univ. Ct.[1]
1839	**Music** [2]	Frederick Niecks	1891	Univ. Court.
1862	**Sanskrit and Comparative Philology** [3]	Julius Eggeling, Ph.D.	1875	Crown.
1868	**Engineering** [4]	George Frederick Armstrong, M.A., M. Inst., C.E.	1885	Crown.
1871	**Geology** [5]	James Geikie, D.C.L., LL.D.	1882	Crown.
1871	**Commercial & Political Economy & Mercantile Law** [6]	Joseph Shield Nicholson, M.A., D.Sc.	1880	Cur., & Merch. Co.
1876	**Theory, History, and Practice of Education** [7]	Simon Somerville Laurie, LL.D.	1876	Bell Trustees.
1879	**Fine Art** [8]	Gerard Baldwin Brown, M.A.	1880	Univ. Ct., Pres. R. Scott. Acad.
1882	**Celtic Languages, History, Literature, and Antiquities** [9]	Donald Mackinnon, M.A.	1882	Cur., & Emeritus Prof. Blackie.

FACULTY OF DIVINITY.

Dean—Malcolm Campbell Taylor, D.D., Professor of Ecclesiastical History.

1583	**Divinity**	Robert Flint, D.D.	1876	Curators.
1642	**Hebrew and Oriental Languages**	John Dobie, M.A., B.D.	1892	Curators.
1694	**Ecclesiastical History**	Malcolm Campbell Taylor, D.D.	1877	Crown.
1846	**Biblical Criticism & Biblical Antiquities**	Archibald Hamilton Charteris, D.D.	1868	Crown.

FACULTY OF LAW.

Dean—John Kirkpatrick, M.A., LL.B., LL.D., Dr Jur., Professor of History.

1707	**Public Law**	Sir Ludovic Grant, Bart., B.A.	1890	Crown.
1710	**Civil Law**	Henry Goudy, LL.B.	1889	Fac. of Adv., and Cur.[10]

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[1] The Professor is elected by nine Delegates, three chosen by the Judges of the Court of Session, three by the Curators, and three by the University Court.

[2] This Chair was endowed by General John Reid.

[3] This Chair was endowed by John Muir, LL.D. (Edin.), D.C.L. (Oxon.), late of the Bengal Civil Service, and by a Parliamentary vote of £200.

[4] This Chair was endowed in 1868 by Sir David Baxter, and by an annual vote of Parliament of £200.

[5] This Chair was endowed in 1871 by a sum of £6000 mortified by Sir Roderick Impey Murchison, Bart., and by an annual vote by Parliament of £200.

[6] This Chair was endowed in 1871 by the Merchant Company of Edinburgh, and other Governors of George Watson's and Daniel Stewart's Hospitals, who have granted a salary of £450 as the endowment.

[7] This Chair was endowed by the Trustees of the late Dr A. Bell, who granted a sum of £6000 for the purpose, to which a further sum of £4500 out of the Bell Fund was added by the Educational Endowments Commission in 1887.

[8] This Chair was endowed by Mr H. G. and Miss Frances Watson.

[9] Endowed with a sum of £14,000, raised by public subscription.

[10] For this Chair the Faculty of Advocates send to the Curators a leet of two, of whom the Curators must choose one.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1719	**History**	John Kirkpatrick, LL.B., LL.D.	1881	Fac. of Adv., and Cur.[1]
1722	**Scots Law**	John Rankine, M.A., LL.D.	1888	Do.[1]
1807	**Medical Jurisprudence and Police**	Sir Douglas Maclagan, M.D.	1862	Crown.
1825	**Conveyancing**[2]	John Philp Wood, W.S.	1891	Cur., Dep.-Kpr. and W.S. Soc.[3]
1871	**Commercial and Political Economy and Mercantile Law**	Joseph Shield Nicholson, M.A., D.Sc.	1880	Cur., & Merch. Co.

FACULTY OF MEDICINE.

Dean—Thomas Richard Fraser, M.D., F.R.S., Professor of Materia Medica.

1676	**Botany**	Bayley Balfour, M.D.	1888	Curators.
1685	**Institutes of Medicine**	Wm. Rutherford, M.D.	1874	Curators.
1685	**Practice of Physic**	Thomas Grainger Stewart, M.D.	1876	Curators.
1705	**Anatomy**	Sir Wm. Turner, M.B.	1867	Curators.
1713	**Chemistry**	Alex. Crum Brown, M.D.	1869	Curators.
1726	**Midwifery & Diseases of Women & Children**	Alex. Russell Simpson, M.D.	1870	Curators.
1741	**Clinical Medicine**	Thomas Grainger Stewart, M.D.	1876	
		Thomas Richard Fraser, M.D.	1877	
		William Smith Greenfield, M.D.	1881	
		Diseases of Women—Alexander Russell Simpson, M.D.	1870	
1767	**Natural History**	James Cossar Ewart, M.D.	1882	Crown.
1768	**Materia Medica**	Thomas Richard Fraser, M.D.	1877	Curators.
1803	**Clinical Surgery**	Thos. Annandale, M.D.	1877	Crown
1807	**Medical Jurisprudence**	Sir Douglas Maclagan, M.D.	1862	Crown.
1831	**Surgery**	John Chiene, M.D.	1882	Curators.
1831	**General Pathology**	William Smith Greenfield, M.D.	1881	Curators.

UNIVERSITY LECTURERS.

Latin	Francis Robert Jamieson, M.A. 1892.
Greek	Alexander Douglas Thomson, M.A. 1892.
English	G. Gregory Smith, M.A. (Edin.), B.A. (Oxon.). 1892.
Logic and Metaphysics	Robert P. Hardie, M.A. (Edin.), B.A. (Oxon.). 1892.

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[1] For each of these Chairs the Faculty of Advocates send to the Curators a leet of two, of whom the Curators must choose one.

[2] Endowed by the Society of Writers to the Signet.

[3] The Election is by—(1) Two Delegates from the Curators; (2) Two from the Society of Writers to the Signet; and (3) The Deputy-Keeper of the Signet.

Moral Philosophy	Charles M. Douglas, M.A., D.Sc. 1892.
Mathematics	Charles Tweedie, M.A., B.Sc. 1892.
Natural Philosophy	William Peddie, D.Sc. 1892.
Applied Mathematics	Cargill G. Knott, M.A., D.Sc. 1892.
Gifford Lecturer on Natural Theology	Professor Otto Pfleiderer, Berlin University. 1892
Forestry	Colonel F. Bailey, R.E. 1892.
Agricultural Entomology	William Fream, LL.D., B.Sc. 1891.
Civil and Criminal Procedure.	John P. Coldstream, W.S. 1884.
Mental Diseases	Thomas S. Clouston, M.D. 1879.
Diseases of the Eye	Douglas Argyll Robertson, M.D. 1883.
Clinical Instruction on Diseases of Children	James Carmichael, M.D. 1885. John Playfair, M.D. 1889.
Comparative Embryology	George Brook. 1885.

ASSISTANTS TO PROFESSORS.

IN THE FACULTY OF ARTS.

Humanity	Francis R. Jamieson, M.A.
Greek	Alex. Douglas Thomson, M.A.
Mathematics	Charles Tweedie, M.A., B.Sc.
Rhetoric and Eng. Liter	Geo. Gregory Smith, M.A. (Edin.), B.A. (Oxon.)
Logic and Metaphysics	R. P. Hardie, M.A. (Edin.), B.A. (Oxon.)
Moral Philosophy	Charles M. Douglas, M.A., D.Sc.
Natural Philosophy	William Peddie, D.Sc.
Do. (Mechanical)	Thomas Lindsay.
History	John Downie, M.A.; D. P. Heatley.
Agriculture	J. William Wallace.
Engineering	W. C. Popplewell, B.Sc.
Geology	George S. Corstorphine, B.Sc.

IN THE FACULTY OF DIVINITY.

Hebrew and Oriental Languages	John William Murray.

IN THE FACULTY OF LAW.

Civil Law	James Mackintosh, B.A. (Oxon.).
Scots Law	A. D. Donald.
Conveyancing	James S. Sturrock, W.S.

IN THE FACULTY OF MEDICINE.

Botany	James Adam Terras, B.Sc.
Physiology or Institutes of Medicine	E. W. Carlier, M.D., B.Sc.; Gustav Mann, M.B., C.M.
Practice of Medicine	Robert A. Fleming, M.A., M.B., C.M.
Anatomy	David Hepburn, M.D., C.M.; James Musgrove, M.D.
Chemistry	Leonard Dobbin, Ph.D.; Hugh Marshall, D.Sc.; Theodore Rettie, B.Sc.; William White Taylor, M.A.
Midwifery	J. Clarence Webster, M.D.
Clinical Medicine Tutors	Joseph Tillie, M.D.; Robert A. Fleming, M.A., M.B., C.M.; W. G. W. Sanders, M.B., C.M.
Clinical Medicine	For Winter Session 1892-93—Donald Macaulay, M.A., M.B., C.M.; J. L. Dick, M.B., C.M.; D. C. Edington, M.B., C.M.; D. C. Watson, M.B., C.M. For Summer 1893—J. Lawson Dick, M.B., C.M.; R. Murray Leslie, M.A., B.Sc., M.B., C.M.; J. A. Hamilton, M.A., M.B., C.M.; George Elder, M.B., C.M.

Natural History	J. Beard, B.Sc., Ph.D.
Materia Medica	Joseph Tillie, M.D.; Wm. C. Sillar, M.B., C.M., B.Sc.
Clinical Surgery Tutor	A. Logan Turner, M.B., C.M.
Clinical Surgery	Charles Arthur Sturrock, M.A., M.B., C.M.; J. T. C. Laing, M.B., C.M.
Medical Jurisprudence	Charles Hunter Stewart, M.B., C.M., B.Sc.
Surgery	David Wallace, M.B., C.M.; Harold J. Stiles, M.B., C.M.; Alfred Duke, M.B., C.M.; Ernest G. Fortune, M.B., C.M.
Pathology	Robert Muir, M.A., M.D.; David Stuart, M.B., C.M.

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Examiners.

PRELIMINARY EXAMINATION.

The Professors of or Lecturers on the several subjects (with Professor Eggeling as Interim-Examiner in Modern Languages), and the following additional Examiners:—

		Appointed
English	William Mitchell, M.A., D.Sc.	1892
Latin **Greek**	Norman M'Lean, B.A. (Cantab.), M.A. (Edin.)	1891
Mathematics	William Harvey, B.A., LL.B.	1888
Modern Languages	Charles D. Campbell	1893
Dynamics	William Harvey, B.A., LL.B.	1888

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Examiners for Degrees, &c.

I.—IN THE FACULTY OF ARTS.

The Professors of or Lecturers on the several Subjects (with Professor Eggeling as Interim-Examiner in Modern Languages), and the following additional Examiners:—

1. LANGUAGE AND LITERATURE.

Latin and Greek	Norman M'Lean, B.A. (Cantab.), M.A. (Edin.). 1891.
English	William Mitchell, M.A., D.Sc. 1892.
Modern Languages	Charles D. Campbell. 1893.
Sanskrit	George B. Gardiner, M.A. 1893.
Hebrew and Oriental Languages	

2. MENTAL PHILOSOPHY.

Logic and Metaphysics, **Moral Philosophy**	William Mitchell, M.A., D.Sc. 1892.
Political Economy	A. H. Briggs Constable, LL.B. 1893.
Education	Maurice Paterson, B.A., LL.D. 1893.
Philosophy of Law	

3. SCIENCE.

Mathematics **Natural Philosophy**	William Harvey, B.A., LL.B. 1888.
Astronomy	J. L. E. Dreyer, Ph.D. 1893.
Chemistry	John Gibson, Ph.D. 1893.
Zoology	W. Herdman, D.Sc. 1893.

Botany	J. Bretland Farmer, M.A. 1893.
Geology	Henry Mowbray Cadell, B.Sc. 1893.

4. HISTORY AND LAW.

History	James Mackinnon, M.A., Ph.D. 1893.
Archæology and Art (History of)	W. M. Conway. 1893.
Constitutional Law and History, Roman Law and Public Law	Frederick P. Walton, LL.B. 1893.

II.—IN THE FACULTY OF DIVINITY.

The Professors of the Faculty of Divinity, and the following additional Examiners :—

William Hastie, B.D. Re-appointed 1892.
Thomas A. Bickerton, B.D. Re-appointed 1892.

III.—IN THE FACULTY OF LAW.

The Professors of the Faculty of Law, with the Examiners in Arts and Professor Eggeling for Preliminary Examinations, and the following additional Examiners :—

Frederick Parker Walton, LL.B. Appointed Jan. 1892.
Robert L. Orr, LL.B. Appointed Jan. 1893.

IV.—IN THE FACULTY OF MEDICINE.

The Professors of the Faculty of Medicine, and the following additional Examiners:—

		Appointed
Natural History	W. Herdman, D.Sc.	1890
Clinical Surgery	J. Crawford Renton, M.D.	1890
Materia Medica	William Craig, M.D.	1892
Physiology	Prof. Wm. Stirling, M.D., D.Sc.	1892
Pathology	Alexander Bruce, M.D.	1892
Surgery	George Thomas Beatson, M.D.	1892
Clinical Medicine	John Wyllie, M.D.	1892
Medical Jurisprudence	Fred. W. Barry, M.D., D.Sc.	1892
Physics	William Harvey, LL.B.	1892
Practice of Medicine	Alexander James, M.D.	1893
Midwifery	A. H. F. Barbour, M.D.	1893
Anatomy	D. J. Cunningham, M.D.	1893
Chemistry	John Gibson, Ph.D.	1893
Botany	J. Bretland Farmer, M.A.	1893

V.—SCIENCE.

1. MENTAL SCIENCE.

The Professors of Logic and Metaphysics, and of Moral Philosophy.

2. PHILOLOGY.

The Professors of Humanity, Greek, Hebrew and Oriental Languages, and of Sanskrit and Comparative Philology.

3. PURE SCIENCE.

The Professors of the subjects and the additional Examiners in Mathematics, Natural Philosophy, Zoology, Chemistry, Astronomy, Anatomy, Physiology, Geology, and Botany.

4. ENGINEERING.

The Professors of Mathematics, Natural Philosophy, Chemistry, and Engineering, the additional Examiners in Mathematics and Chemistry, and in

Engineering	Alexander Leslie, C.E.	1892

5. PUBLIC HEALTH.

The Professors of Chemistry, Natural Philosophy, Practice of Physic, Materia Medica, Medical Jurisprudence, and Engineering, and the following additional Examiners :—

		Appointed.
Medicine in its application to Public Health, Practical Sanitation, Sanitary Law, and Vital Statistics	F. W. Barry, M.D., D.Sc.	—
Physics	William Harvey, B.A., LL.B.	1892
Laboratory Work	James Angus Cameron, M.D., B.Sc.	1893

6. AGRICULTURE.

The Professors of Agriculture, Chemistry, Botany, Natural History, Geology, Political Economy, and Engineering, and the following additional Examiners :—
The additional Examiners in Chemistry, Botany, Natural History, Geology, and Political Economy, and in

Agriculture	Wm. Somerville, B.Sc., D.Œcon.	1893
Veterinary Hygiene	W. Owen Williams	1893
Chemistry as applied to Agriculture	John Hunter	1893

FOR SCHOOLMASTER'S DIPLOMA.

The Professor of Education and Maurice Paterson, B.A., LL.D. 1889

FOR TITLE OF LITERATE IN ARTS.

The Professors of the Subjects, and the Examiners for Degrees in Arts.

University Librarian.

Hugh Alexander Webster.

Assistants.

Alexander Anderson.
James H. S. Gregory.
David Cuthbertson.
Charles Martin.
George Tait.
William Wright, *at University New Buildings.*

Keepers of Museums.

Museum of Natural History	Professor Ewart.
Anatomical Museum	Professor Sir Wm. Turner.
Assistant	James Simpson.

Clerk of Senatus, and Sec. and Reg. of General Council	Thomas Gilbert.
Assistant Clerks	James Oliver Sinclair, James Dowie.
Clerk of Works	Allan E. L. Clark.
Janitor	John Chapman.
Warders	Alex. Adair, James Donaldson.

Staff of Twelve Servitors.

University of Edinburgh.

CONSTITUTION.

THE University of Edinburgh has grown into its present status out of what was originally a small College, called the "College of Edinburgh" or "The Town's College," which was founded in 1583 by the Town Council of Edinburgh, under the general powers to found educational institutions granted to them by the Charter of King James VI., dated 14th April 1582. No separate Charter of foundation is now extant; but from the first the College possessed the privilege of conferring degrees. This privilege was ratified by the "Act of Confirmation," an Act of Parliament passed in 1621, which secured to the "College of James VI." (as it had come to be called) all the rights, immunities, and privileges enjoyed by the Universities of Scotland. This ratification was renewed in the Treaty of Union between England and Scotland, and in the Act of Security. Gradually, in Acts of General Assembly, Acts of Town Council, and Acts of Parliament, the "College of James VI." came to be styled "The University of Edinburgh." But the institution remained under the absolute control and patronage of the Town Council of Edinburgh down to 1858, when, by the Universities (Scotland) Act, all the Universities of Scotland received new and autonomous constitutions.

The University of Edinburgh is a Corporation consisting of the Chancellor, Rector, Principal, Professors, Registered Graduates and Alumni, and Matriculated Students; and from 1858 to 1890 its government was vested in the Senatus Academicus, subject to the review and control of the University Court.

By the Universities (Scotland) Act, 1889, the University Court was constituted a body corporate with perpetual succession and a Common Seal; and the whole property, heritable and movable, belonging to the University, at the date of the passing of the Act, was transferred to and vested in the Court, with power to administer and manage the whole revenue and property of the University.

In addition to the various Endowments for Chairs, Fellowships, Scholarships, Bursaries, &c., the University possesses the property of the Old and New University Buildings, with the Libraries, Museums, Laboratories, Specimens, Apparatus, Furnishings, and Fittings; the Music Class Room, containing a large organ, an interesting collection of Acoustic and Antique Musical Instruments, and a valuable Library of Music; and the official residence of the Principal.

The Senatus Academicus, as heretofore, regulates and superintends the teaching and discipline of the University, subject to the provisions of the Universities (Scotland) Acts of 1858 and 1889.

It may be interesting to show the numbers of Matriculated Students in the University, and the numbers of Degrees conferred by the University, immediately before the Acts of 1858 and of 1889 respectively came into operation.

The numbers of Matriculated Students were :—

	Arts.	Divinity.	Law.	Medicine.	Total.
In 1858-59	573	90	237	526	1336
In 1888-89	1022	109	471	1949	3551

The numbers of Degrees conferred were :—

	Arts.	Divinity.	Law.	Medicine.		Science.	
				M.B., C.M.	M.D.	B.Sc.	D.Sc.
In 1859	16	—	—	—	60	—	—
In 1889	116	11	23	210	60	34	2

The Degrees in Divinity, Law, and Science were instituted since 1859.

CHANCELLOR.

The Chancellor is elected for life by the General Council. He is the Head of the University. Changes in its ordinances and in its internal arrangements, proposed or approved by the University Court, must receive his sanction. All Degrees are conferred by him, or his deputy, the Vice-Chancellor. The Chancellor is President of the General Council, and nominates an Assessor in the University Court. The appointments have been as follows:—

Right Hon. Lord Brougham, 1859.
Right Hon. John Inglis, D.C.L., LL.D., 1868.
Right Hon. Arthur J. Balfour, M.P., D.C.L., LL.D., &c., 1891.

VICE-CHANCELLOR.

The Vice-Chancellor is nominated by the Chancellor. He may, in the absence of the Chancellor, confer Degrees, but cannot discharge any other of the Chancellor's duties. In the Vice-Chancellor's absence Degrees are conferred by the Principal, or, in his absence, by the senior member of Senatus present.

Upon the Vice-Chancellor is imposed the duty of acting as Returning Officer at Parliamentary Elections. If there be no Vice-Chancellor at the time of an Election, the University Court appoints one to act as Returning Officer. The appointments have been—

Sir D. Brewster, appointed 1860.
Sir Alexander Grant, Bart., 1868.
Sir William Muir, K.C.S.I., D.C.L., &c., 1885.

RECTOR.

The Rector is elected by the Matriculated Students on the second Saturday after the beginning of the Winter Session. The term of office is three years. The next election will take place on *Saturday*, 11*th November* 1893. The Rector is President of the University Court, and nominates an Assessor in the University Court. No Principal or Professor of any Scottish University is eligible for the office of Rector. The appointments have been—

Rt. Hon. W. E. Gladstone, 1859.
Thomas Carlyle, 1865.
Rt. Hon. Lord Moncreiff, 1868.
Sir W. Stirling Maxwell, Bt., 1871.
Rt. Hon. Earl of Derby, 1874.
Most Hon. Marquess of Hartington, M.P., 1877.
Rt. Hon. Earl of Rosebery, 1880.
Rt. Hon. Earl of Iddesleigh, 1883.
Most Hon. Marquess of Lothian, 1887.
Rt. Hon. George J. Goschen, M.P., LL.D., 1890.

REPRESENTATIVE IN PARLIAMENT.

In accordance with Clauses 27 to 41 of the "Representation of the People (Scotland) Act," 31 & 32 Vict., cap. 48, the Members of the General Councils of the Universities of Edinburgh and St Andrews elect a Member to serve in Parliament for these Universities.

When a poll is demanded, the votes are given by voting papers issued by the Registrar.

The appointments have been—

Sir Lyon Playfair, K.C.B., LL.D., 1868.
Rt. Hon. J. H. A. Macdonald, C.B., Q.C., LL.D., 1885, 1886.
M. T. Stormonth Darling, Q.C., 1888.
Sir CHARLES JOHN PEARSON, Q.C., 1890.

The Parliamentary constituency for 1893 is as follows :—

Edinburgh	7154
St Andrews	1514
Total in 1893	8668

UNIVERSITY COURT.

The University Court has the following powers conferred by the "Universities Scotland Act, 1858," Sec. xii. :—

1. To review all decisions of the Senatus Academicus, and to be a Court of Appeal from the Senatus in every case, except as otherwise provided in the Universities Act:

2. To effect improvements in the internal arrangements of the University, after due communication with the Senatus Academicus, and with the sanction of the Chancellor; provided that all such proposed improvements shall be submitted to the general Council for their consideration:

3. To require due attention on the part of the Professors to the Regulations as to the mode of teaching and other duties imposed on the Professors:

4. To fix and regulate, from time to time, the Fees in the several Classes:

5. Upon sufficient cause shewn, and after due investigation, to censure any member of the Senatus Academicus, or to suspend him from his office, and from the emoluments thereof, in whole or in part, for any period not exceeding one year, or to require him to retire from his office on a retiring allowance, or to deprive him of his office; and during the Suspension of any Professor, to make due provision for the teaching of his class: Provided always that no such sentence of censure, suspension, or deprivation, or requisition on a Professor to retire from office, shall have any effect until it has been approved by Her Majesty in Council:

By Sec. xix. any of the Rules, Statutes, and Ordinances enacted by the Universities Commissioners for the purposes of the Act, may be altered or revoked by the University Court of the University to which the same are applicable, but only with the consent, expressed in writing, of the Chancellor thereof, and with the approval of Her Majesty in Council.

By the Universities (Scotland) Act, 1889, Section 5, Subsection (3), the University Court is a body corporate with perpetual succession and a common seal; and all the property belonging to the University, or to any existing college forming part of the University at the date of the passing of the Act, is thereby declared to be vested in the University Court.

By Section 6 of the last mentioned Act, the University Court, in addition to the powers conferred upon it by the Universities (Scotland) Act, 1858, subject to any ordinances made by the Commissioners, has power—

(1.) To administer and manage the whole revenue and property of the University, and the college or colleges thereof existing at the passing of this Act, including the share appropriated to such University out of the annual grant hereinafter mentioned, and also including funds mortified for bursaries and other purposes, and to appoint factors or collectors, to grant leases, to draw rents, and generally to have all the powers necessary for the management and administration of the said revenue and property:

(2.) To review any decision of the Senatus Academicus on a matter within its competency which may be appealed against by a member of the Senatus, or other member of the University having an interest in the decision, within such time as may be fixed by the Commissioners, and to take into consideration all representations and reports made to it by the Senatus Academicus and by the general council:

(3.) To review, on representation made by any of its members, or by any member of the Senatus Academicus, within such time as may be fixed by the Commissioners, any decision which the Senatus Academicus may come to in the exercise of its powers under section seven, sub-section one: Provided always, that the University Court shall not review any decision of the Senatus Academicus in a matter of discipline, except upon appeal taken either by a member of the Senatus or by a member of the University directly affected by such decision:

(4.) To appoint professors whose chairs are, or may come to be, in the patronage of the University; to appoint examiners and lecturers; and to grant recognition to the teaching of any college or individual teacher for the purposes of graduation, under any regulations on the subject laid down by the Commissioners, which regulations after the expiration of their powers may from time to time be modified or altered by the Universities Committee:

(5.) To define on application by any member of the Senatus Academicus the nature and limits of a professor's duties under his commission, subject to appeal to the Universities Committee:

(6.) To take proceedings against a principal or professor, University lecturer, assistant, recognised teacher or examiner, or any other person employed in teaching or examining under section twelve, sub-section five, of the Universities (Scotland) Act, 1858, without the necessity of any one not a member of the Court appearing as prosecutor, and for the purposes of such proceedings to call before it any member of the University to give evidence, and to require the production of documents, and also to institute and conduct any such inquiries as it may deem necessary:

(7.) To appoint from among members of the University or others, not being members of the Senatus Academicus, one third of the members of any standing committee or committees charged, by ordinance of the Commissioners under this Act, with the immediate superintendence of any libraries or museums, or the contents thereof, belonging to the University and college or colleges thereof existing at the passing of this Act, and on representation made by any of its members, or by any member of the Senatus Academicus, to review any decision which the Senatus Academicus, in the exercise of its powers, may come to in respect of the recommendations of such committee or committees:

(8.) To appoint committees of its own number consisting of not less than five members, with powers to report on any business that may be entrusted to them by the University Court, or to carry out special instructions ordered by the University Court:

(9.) To elect the representative of the University on the General Medical Council, under the Medical Act, 1886:

(10.) After the expiration of the powers of the Commission to found new professorships with the approval of the Universities Committee, and after such expiration no new professorship shall be founded except as herein [in the Act of 1889] provided.

After the expiration of the powers of the Commissioners, the University Court, by Section 21, shall have power to make such ordinances as they think fit, with the approval of Her Majesty in Council:

(1.) With respect to the appropriation of the sum allotted to such University by the Commissioners out of the annual grant hereinafter referred to;

(2.) Altering or revoking any of the ordinances affecting such University which have been or may be framed and passed under the Universities (Scotland) Act, 1858, or this Act, and making new ordinances:

Provided that such ordinances, before being submitted to Her Majesty for approval, shall have been communicated by the University Court to the Senatus Academicus and to the General Council, whose opinion thereon, if returned to the University Court within one month, shall have been taken into consideration; provided also that the said ordinances, when finally adjusted by the University Court, shall have been communicated to the University Courts of the other Universities, and that, if notice of dissent to such ordinances shall have been taken by any University Court, or by any person directly affected by such ordinance, to the University Court making such

> ordinances within one month after the receipt thereof, the dissenting University Court or person may within one month after notifying dissent make a representation in regard thereto to Her Majesty in Council; provided further that no ordinance made under this section shall be of any validity until it has been approved by Her Majesty in Council, and that it shall be lawful for Her Majesty to refer such ordinances to the Universities Committee, who shall report to Her Majesty thereon: Provided further, that such ordinances shall be laid before both Houses of Parliament in the manner provided by section twenty of this Act: Provided further, that in computing the period of one month for the purposes of this section, the months of August and September shall not be counted, nor any part thereof.

Stated Meetings of the Court are held for the despatch of ordinary business on the Monday occurring during the seven days beginning on the 12th and ending on the 18th, both days inclusive, of each month, excepting the months of August and September, and on the first Monday after 19th January, if necessary, for hearing Registration Appeals. Other Ordinary Meetings may be called as the Court may direct. Special Meetings may at any time be called by order of the Rector or the Principal, or by the Secretary on a requisition specifying the object, signed by at least three members of the Court. Appointments of Examiners in the Faculties of Divinity, Law, and Medicine, and in Science are made at the monthly meeting in January; and of Examiners in Arts at the monthly meeting in July. Appointments of Class Assistants are required to be submitted for approval on the third Monday in November.

The University Court holds the patronage of the Chair of Music, and, in conjunction with the President of the Royal Scottish Academy, that of the Chair of Fine Art, as well as a share in the patronage of the Chair of Agriculture. It also elects three of the seven Curators, and appoints the Additional Examiners for Degrees in Arts, Science, Divinity, Law, and Medicine, and the Examiner for the Schoolmaster's Diploma. The appointments of those Assistants to Professors provided for by Ordinance of the Universities Commissioners are subject to its approval.

The Court consists of the following members, viz.:—1. The Rector; 2. The Principal; 3. The Lord Provost of Edinburgh for the time being; 4. An Assessor nominated by the Chancellor;

5. An Assessor nominated by the Rector; 6. An Assessor nominated by the Lord Provost, Magistrates, and Town Council of Edinburgh; 7. Four Assessors elected by the General Council; 8. Four Assessors elected by the Senatus Academicus; 9. Such number, not exceeding four in all, of representatives of affiliated Colleges as may be appointed under and subject to the arrangements made in terms of section fifteen, sub-section (4), of the Act of 1889: Provided always, that the total number of representatives of affiliated Colleges in the University Court of any University may be increased by the Commissioners or, after the expiration of their powers, by the Universities Committee, if in their opinion respectively special circumstances should arise to require such increase.

Seven members constitute a quorum. The Rector and his Assessor continue in office for three years; but in the event of the Chancellor or Rector ceasing to hold office, his Assessor continues to be a member of the University Court until an Assessor is nominated by the new Chancellor or Rector. The other Assessors continue in office for four years; but all Assessors are eligible for re-election, and no Principal or Professor of any Scottish University is eligible for election as Assessor to any other person or body than the Senatus Academicus. The Rector, and in his absence the Principal, presides at meetings of the University Court, and in the absence of both of them a chairman for the time is elected by the meeting. The person presiding at any meeting of the University Court has a deliberative vote, and also a casting vote in case of equality.

An abstract of the proceedings of the Court is given in a subsequent part of the Calendar.

The names of the present Assessors are given at page 1. The names of the Assessors previously to 1888 will be found in the Historical Appendix to List of University Graduates, published in 1889 (page 105). Former Assessors since 1888 — *Elected by Chancellor*, T. Graham Murray, LL.D., 1887-1891. *Elected by Senatus Academicus*, A. Campbell Fraser, D.C.L., LL.D., 1877-1891. Malcolm Campbell Taylor, D.D., 1889-92.

UNIVERSITIES COMMITTEE OF PRIVY COUNCIL.

There shall be a Committee of Her Majesty's Privy Council styled the Scottish Universities Committee of the Privy Council.

The Universities Committee shall consist of the Lord President of the Privy Council, the Secretary for Scotland, the Lord Justice General, if a member of the Privy Council, the Lord Justice Clerk, if a member of the Privy Council, the Lord Advocate, if a member of the Privy Council, the Chancellor of each of the Universities, if a member of the Privy Council, the Lord Rector of each of the Universities, if a member of the Privy Council, one member at least of the Judicial Committee of the Privy Council, and such other member or members of the Privy Council as Her Majesty may from time to time think fit to appoint.

The powers and duties of the Universities Committee may, subject to any rules or regulations which may from time to time be passed by Her Majesty in Council, be exercised and discharged by any three or more of the members of the Committee, one of whom shall be a member of the Judicial Committee of the Privy Council or one of Her Majesty's Senators of the College of Justice in Scotland.

CURATORS OF PATRONAGE.

By the Universities (Scotland) Act (1858), the patronage of the seventeen Chairs, previously in the gift of the Town Council, was transferred to seven Curators—three nominated by the University Court, and four by the Town Council. Besides these seventeen Chairs, the Curators have also a share in the patronage of those of Humanity, Agriculture, Civil Law, History, Law of Scotland, and Conveyancing, which was formerly possessed by the Town Council. They have also a share in the Patronage of Celtic Languages and Literature, and Commercial and Political Economy and Mercantile Law, which were instituted after the passing of the 1858 Act. The Curators hold office for three years. The names of the present Curators are given at page 2. The names of the former Curators will be found in the Historical Appendix to List of University Graduates published in 1889 (pages 105 and 106). Former Curators since 1888—

Elected by University Court.
Lord Balfour of Burleigh, 1884-91.
T. Graham Murray, W.S., LL.D., 1884-91.

Elected by Town Council.
James Cowan, 1886-89.
John Boyd, 1876-91.
James M'Intosh, S.S.C., 1889-92.

REPRESENTATIVE IN GENERAL MEDICAL COUNCIL.

In accordance with the Medical Act of 1858, the Universities of Edinburgh and Aberdeen were entitled jointly to elect a Member of the "General Council of Medical Education and Registration of the United Kingdom." The appointments have been—

1858. James Syme.
1868. John Macrobin, M.D.
1873. William Turner, M.B.
1883. John Struthers, M.D.

Under the provisions of the Medical Act of 1886, Professor Sir William Turner was appointed in December 1886 for a period of five years, as representative of the University of Edinburgh.

1886. Sir William Turner, M.B., LL.D.

From 1858 to 1890 the Senatus exercised the right of election of the Representative of the University in the General Medical Council. By the Act of 1889, the Court is empowered to elect the Representative in future.

1891. Sir WILLIAM TURNER, M.B., D.C.L., LL.D.

PRINCIPAL.

The Principal, formerly elected by the Town Council, is now appointed by the Curators. The office is held for life. The Principal is the resident Head of the College, and President of the Senatus Academicus; and, in the absence of the Rector, he presides at the meetings of the University Court, and in the absence of the Chancellor and Rector he presides at the Statutory Meetings of the General Council, and also at the Special Meetings, excepting those for the election of Assessors.

Principals Elected since 1586.

1586. Robert Rollock, *previously Regent*
1599. Henry Charteris
1620. Patrick Sands
1622. Robert Boyd
1623. John Adamson
1653. Robert Leighton
1662. William Colvill
1675. Andrew Cant
1685. Alexander Monro
1690. Gilbert Rule
1703. William Carstares
1716. William Wishart
1730. William Hamilton
1732. James Smith
1736. William Wishart, *secundus*
1754. John Gowdie
1762. William Robertson
1793. George Husband Baird
1840. John Lee
1859. Sir David Brewster
1868. Sir Alexander Grant, Bart.
1885. Sir Wm. Muir, K.C.S.I.

SENATUS ACADEMICUS.

The Principal and the Professors constitute the Senatus Academicus. This body is entrusted with the superintendence and regulation of the teaching and discipline of the University. The Senatus elects four Assessors in the University Court who hold office for four years. Two retire biennially, but may be re-elected; and in the event of a casual vacancy, the person elected to fill such vacancy shall go out of office at the date when the person whom he succeeded would in the ordinary rotation have retired. It appoints two-thirds of the members of any standing committee or committees charged by ordinance of the Commissioners with the immediate superintendence of any libraries or museums, or the contents thereof, belonging to the University and college or colleges thereof existing at the passing of this Act; and receives in the first instance all reports by such committee or committees, and subject to the review of the University Court, confirms, modifies, or rejects the recommendations in such reports. It also elects a representative in the General Assembly of the Church of Scotland; two Managers of the Royal Infirmary; two Governors of George Heriot's Trust; two Governors of Morrison's Academy, Crieff; two Governors of the Spence Bursary Trust; one Governor of Dollar Institution; one Governor of Stiell's Hospital, Tranent; two-thirds of the University Library Committee; and two-thirds of the University Museum Committee. Degrees in Arts, Divinity, Law, Medicine, and Science are conferred, on the recommendation of the Senatus, by the Chancellor or Vice-Chancellor, and in the absence of both, by the Principal or senior Professor present. The Principal is President, with a deliberative and also a casting vote. In the absence of the Principal, the Senior Professor present acts as Chairman, also with a double vote. The Ordinary Meetings of Senatus are held on Saturday 21st October, the last Saturday of November, January, February, and March; on the Saturday immediately preceding the Christmas holidays; on the last Friday of May, June, and July; on 1st August, not being a Sunday (for conferring Degrees in Law, Medicine, Science, &c.); and in April (for Degrees in Arts, Divinity, Law, &c.), on a day fixed at the Meeting in the January of the preceding year. Extraordinary Meetings may be called by the Principal or by three Professors. One-third of the Senatus constitutes a quorum.

The business of the Senatus is conducted by the Secretary, who, among other duties, summons the Meetings, prepares the Minutes, and intimates business assigned to the Principal, to the Deans of Faculties, or to the Conveners of Committees. The Secretary also administers the *Sponsio Academica* to Graduates.

FACULTIES.

The University contains four Faculties, and a Science Degrees Committee. Each Faculty is presided over by a Dean, who is elected from among the Professors of the Faculty, with the approval of the Senatus. Persons recommended for Degrees in each Faculty are presented to the Senatus by the Dean to whom all communications regarding the administration of the Faculty should be addressed. Persons recommended for Degrees in Science are presented by the Convener of the Section in which the Degrees are conferred. The Deans of the Faculties are mentioned at pp. 2, 3, and 4.

FACULTY OF ARTS.

The Faculty of Arts is the most ancient Faculty in the University, and comprehends the Chairs of Humanity (Latin), Mathematics, Greek, Logic and Metaphysics, Moral Philosophy, Natural Philosophy, Rhetoric and English Literature, History (in conjunction with the Faculty of Law), Practical Astronomy, Agriculture, Music, Sanskrit, Civil Engineering, Geology, Political Economy (in conjunction with the Faculty of Law), Theory of Education, Fine Art, and the Celtic Languages and Literature.

REGENTS AND PROFESSORS IN THE FACULTY OF ARTS SINCE 1583.

Regents of Philosophy from 1583 *to* 1708.

[*The Regents of Philosophy taught in rotation the four classes in the Curriculum of Arts, the "Bajans," the "Semi-Bajans," the "Bachelors," and the "Magistrands," as the Students of the first, second, third, and fourth year were respectively styled. Each Regent therefore taught every subject in the Curriculum—the Regent of Humanity being subordinate to the Regent of Philosophy, and being employed as a tutor in Classics for Unmatriculated Students. In* 1708 *the system was changed, and separate Professors for Latin, Greek, Logic and Metaphysics, Moral Philosophy and Natural Philosophy, were substituted for the Regents. A Professorship of Mathematics had previously existed.*]

1583. Robt. Rollock, *first Regent*
1583. Duncan Nairn
1585. Charles Lumisdaill
1586. Adam Colt
1586. Alexander Scrimgeour
1587. Philip Heslop
1588. Charles Ferme or Fairholm
1589. Henry Charteris
1589. Patrick Sands
1594. George Robertson
1597. William Craig
1597. John Adamson
1598. James Knox
1598. Robert Scott
1601. Andrew Young
1603. James Reid
1604. David Munro
1606. Blase Colt
1607. James Fairley
1608. William King
1611. Andrew Stevenson
1625. Samuel Rutherford
1625. Robert Ranken
1626. Thomas Crawford
1626. John Brown
1631. Alexander Hepburn
1636. James Wyseman
1638. James Wright
1638. Robert Young
1639. Duncan Forrester
1644. William Tweedie
1644. James Pillans
1647. Andrew Suttie
1653. John Wishart
1665. George Sinclair
1666. John Wood
1667. William Paterson
1679. Gilbert M'Murdoch
1679. Andrew Massie
1680. Alexander Cockburn
1682. Robert Lidderdail
1684. Herbert Kennedy
1686. Thomas Burnet
1689. Alexander Cunningham
1690. William Law
1695. John Row
1695. William Scott
1701. Charles Areskine
1703. Robert Stewart
1707. Colin Drummond

Regents of Humanity from 1597 *to* 1708.

1597. John Ray
1606. Blase Colt

1611. Oliver Colt
1611. Robert Burnet
—— Andrew Stevenson
1623. Samuel Rutherford
1626. Thomas Craufurd
1630. John Armour
1633. Alexander Gibson
1636. James Wyseman
1638. Robert Young
1644. James Pillans
1653. John Wishart
1656. William Forbes
1656. James M'Gowan
1658. Hugh Smith
1663. William Cumming
1665. Andrew Ross
1665. Thomas Bell
1676. Gilbert MacMurdo
1679. Alexander Cunningham
1689. John Drummond

Professsors of Mathematics since 1620.

1620. Andrew Young
1640. Thomas Craufurd
1674. James Gregory
1683. David Gregory
1692. James Gregory
1725. Colin M'Laurin
1747. Matthew Stewart
1775. Dugald Stewart
1785. Adam Ferguson
1785. John Playfair
1805. John Leslie
1819. William Wallace
1838. Philip Kelland
1879. GEORGE CHRYSTAL

Professors of Humanity since 1708.

1708. Laurence Dundas
1728. Adam Watt
1734. John Kerr
1741. George Stuart
1775. John Hill
1806. Alexander Christison
1820. James Pillans
1863. William Young Sellar
1891. H. CHESTER GOODHART

Professors of Greek since 1708.

1708. William Scott, *one of the Regents*
1729. William Scott, *secundus*
1730. Colin Drummond
1738. Robert Law
1741. Robert Hunter
1772. Andrew Dalziel
1805. George Dunbar
1852. John Stuart Blackie
1882. SAMUEL HENRY BUTCHER

Professors of Logic and Metaphysics since 1708.

1708. Colin Drummond, *one of the Regents*
1730. John Stevenson
1774. John Bruce
1786. James Finlayson
1808. David Ritchie
1836. Sir Wm. Hamilton, Bart.
1856. Alexander Campbell Fraser
1891. ANDREW SETH

Professors of Moral Philosophy since 1708.

1708. William Law, *one of the Regents*
1729. William Scott
1734. John Pringle
1745. William Cleghorn
1754. James Balfour
1764. Adam Ferguson
1785. Dugald Stewart
1810. Thomas Brown
1820. John Wilson
1853. P. C. M'Dougall
1868. HENRY CALDERWOOD

Professors of Natural Philosophy since 1708.

1708. Robert Stewart, *one of the Regents*
1742. John Stewart
1759. Adam Ferguson

1764. James Russell
1774. John Robison
1805. John Playfair
1819. Sir John Leslie
1833. James David Forbes
1860. PETER GUTHRIE TAIT

Professors of Rhetoric and English Literature since 1762.

1762. Hugh Blair
1784. William Greenfield
1801. Andrew Brown
1835. George Moir
1840. William Spalding
1845. William Edmondstoune Aytoun
1865. DAVID MASSON

Professors of History since 1719.
(See Faculty of Law.)

Professors of Practical Astronomy since 1786.

1786. Robert Blair
1834. Thomas Henderson
1846. Charles Piazzi Smyth
1889. RALPH COPELAND

Professors of Agriculture since 1790.

1790. Andrew Coventry
1831. David Low
1854. John Wilson
1885. ROBERT WALLACE

Professors of the Theory of Music since 1839.

1839. John Thomson.
1841. Sir Henry Rowley Bishop
1844. Henry Hugh Pearson
1845. John Donaldson
1865. Sir Herbert Stanley Oakeley
1891. FREDERICK NIECKS.

Professor of Technology.

1855. George Wilson
[Chair abolished 1859.]

Professors of Sanskrit since 1862.

1862. Theodor Aufrecht
1875. JULIUS EGGELING

Professors of Engineering.

1868. Fleeming Jenkin
1885. GEORGE FREDERICK ARMSTRONG

Professors of Geology.

1871. Archibald Geikie
1882. JAMES GEIKIE

Professors of Commercial and Polit. Economy and Mercantile Law.
(See also Faculty of Law.)

1871. W. B. Hodgson
1880. JOSEPH SHIELD NICHOLSON

Professor of Education.

1876. SIMON SOMERVILLE LAURIE

Professor of Fine Art.

1880. GERARD BALDWIN BROWN

Professor of Celtic Languages, &c.

1882. DONALD MACKINNON

FACULTY OF DIVINITY.

This Faculty, the second in chronological order, comprehends the four Chairs of Divinity, Hebrew and Oriental Languages, Divinity and Ecclesiastical History, and Biblical Criticism and Antiquities.

PROFESSORS IN THE FACULTY OF DIVINITY SINCE 1620.

Professors of Divinity since 1620.

1620. Andrew Ramsay
1627. Henry Charteris
1629. James Fairly
1630. John Sharpe
1648. Alexander Colvill
1649. Samuel Rutherford
1650. David Dickson
1662. Patrick Scougall
1664. William Keith
1675. Laurence Charteris
1682. John Menzies
1683. John Strachan
1690. George Campbell
1701. George Meldrum
1709. William Hamilton
1732. James Smith
1733. John Gowdie
1754. Robert Hamilton
1779. Andrew Hunter
1809. William Ritchie
1828. Thomas Chalmers
1844. John Lee
1859. Thomas J. Crawford
1876. ROBERT FLINT

Professors of Hebrew and Oriental Languages since 1642.

1642. Julius Conradus Otto
1656. Alexander Dickson
1679. Alexander Amedeus
1681. Alexander Douglas
1692. Patrick Sinclair
1694. Alexander Rule
1702. John Goodall
1719. James Crawford
1732. William Dawson
1751. James Robertson
1792. George Husband Baird
1793. William Moodie
1812. Alexander Murray
1813. Alexander Brunton
1848. David Liston
1880. David Laird Adams
1892. JOHN DOBIE

Professors of Ecclesiastical History since 1695.

1702. John Cumming
1715. William Dunlop
1726. Matthew Crawford
1737. Patrick Cumming
1762. Robert Cumming
1788. Thomas Hardie
1799. Hugh Meiklejohn
1831. David Welsh
1844. James Robertson
1861. William Stevenson
1872. Robert Wallace
1876. MALCOLM CAMPBELL TAYLOR.

Professors of Biblical Criticism and Biblical Antiquities since 1846.

1847. Robert Lee
1868. ARCHIBALD HAMILTON CHARTERIS

FACULTY OF LAW.

To this Faculty belong seven Chairs, viz.:—Public Law, Civil or Roman Law, Constitutional Law and History (in conjunction with the Faculty of Arts), Law of Scotland, Medical Jurisprudence (in conjunction with the Faculty of Medicine), Conveyancing, and Commercial and Political Economy and Mercantile Law (in conjunction with the Faculty of Arts). Attendance on these classes is required by Candidates for Degrees in Law.

PROFESSORS IN THE FACULTY OF LAW SINCE 1707.

Professors of Public Law since 1707.

1707. Charles Areskine
1734. William Kirkpatrick
1735. George Abercrombie
1759. Robert Bruce
1764. James Balfour
1779. Allan Maconochie
1796. Robert Hamilton
1832. * * *
1862. James Lorimer
1890. Sir LUDOVIC GRANT, Bt.

Professors of Civil Law since 1710.

1710. James Craig
1732. Thomas Dundas
1745. Kenneth M'Kenzie
1755. Robert Dick
1792. John Wilde
1800. Alexander Irving
1827. Douglas Cheape
1842. A. Campbell Swinton
1862. James Muirhead
1889. HENRY GOUDY

Professors of History since 1719.

1719. Charles Mackie
1753. John Gordon
1754. William Wallace
1755. John Pringle
1780. Alex. Fraser Tytler
1801. William Fraser Tytler
1821. Sir William Hamilton
1837. George Skene
1842. James Frederick Ferrier
1846. Cosmo Innes
1874. Æneas J. G. Mackay
1881. JOHN KIRKPATRICK

Professors of the Law of Scotland since 1722.

1722. Alexander Bayne
1737. John Erskine
1765. William Wallace
1786. David Hume
1822. George Joseph Bell
1843. John Schank More
1861. George Ross
1864. George Moir
1865. Norman Macpherson
1888. JOHN RANKINE

Professors of Medical Jurisprudence since 1807.

1807. Andrew Duncan, *secundus*
1820. William Pulteney Alison
1822. Robert Christison
1832. Thomas Stewart Traill
1862. Sir DOUGLAS MACLAGAN

Professors of Conveyancing since 1825.

1825. Macvey Napier
1847. Allan Menzies
1856. A. Montgomerie Bell
1866. James Stuart Fraser Tytler
1892. JOHN PHILP WOOD

Professors of Commercial and Political Economy since 1871.[1]

1871. W. B. Hodgson, and re-appointed 1878.
1880. JOSEPH SHIELD NICHOLSON, re-appointed 1887.

FACULTY OF MEDICINE.

The Faculty consists of the following twelve Chairs:—Botany, Institutes of Medicine, Practice of Physic, Anatomy, Chemistry, Midwifery, Natural History, Materia Medica, Clinical Surgery,

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[1] This Chair was declared to be a Professorship in the Law as well as in the Arts Faculty by resolution of the Senatus Academicus in 1879.

Medical Jurisprudence (in conjunction with the Faculty of Law), Surgery, and General Pathology. The Professors of Practice of Physic, Materia Medica, and Pathology, are also Professors of Clinical Medicine. Some of these Chairs were instituted in the seventeenth century, but it does not appear that the Medical School and Faculty of the University were established earlier than the beginning of last century.

PROFESSORS IN THE FACULTY OF MEDICINE SINCE 1676.

Professors of Botany since 1676.

1676. James Sutherland
1706. Charles Preston
1712. George Preston

Professors of Medicine and Botany.

1738. Charles Alston
1761. John Hope
1786. Daniel Rutherford
1820. Robert Graham
1845. John Hutton Balfour
1879. Alexander Dickson
1888. ISAAC BAYLEY BALFOUR

Professors of Medicine in 1685.

1685. { Sir Robert Sibbald
James Halket
Archibald Pitcairne }

Professors of Institutes of Medicine since 1724.

1724. William Porterfield
1726. { Andrew St Clair
John Rutherford }
1747. Robert Whytt
1766. William Cullen
1773. Alex. Monro Drummond
1776. James Gregory
1789. Andrew Duncan
1819. Andrew Duncan, *secundus*
1821. William Pulteney Alison
1842. Allen Thomson
1848. John Hughes Bennett
1874. WILLIAM RUTHERFORD

Professors of Practice of Physic since 1724.

1724. William Porterfield
1726. { Andrew St Clair
John Rutherford }
1747. Robert Whytt
1766. John Gregory
1773. William Cullen
1790. James Gregory
1821. James Home
1842. William Pulteney Alison
1855. Thomas Laycock
1876. THOMAS GRAINGER STEWART

Professors of Anatomy since 1705.

1705. Robert Elliot
1708. Adam Drummond
1716. John M'Gill
1720. Alexander Monro
1754. Alex. Monro, *secundus*
1798. Alexander Monro, *tertius*
1846. John Goodsir
1867. Sir WILLIAM TURNER

Professors of Chemistry and Medicine since 1713.

1713. James Crawford
1726. Andrew Plummer
1726. John Innes
1755. William Cullen
1766. Joseph Black
1795. Thomas Charles Hope

Professors of Chemistry.

1844. William Gregory
1858. Lyon Playfair
1869. Alex. Crum Brown

Professors of Midwifery since 1726.

1726. Joseph Gibson
1739. Robert Smith
1756. Thomas Young
1780. Alexander Hamilton
1800. James Hamilton
1840. Sir J. Y. Simpson, Bart.
1870. Alexander Russell Simpson

Professors of Natural History since 1767.

1770. Robert Ramsay
1779. John Walker
1804. Robert Jameson
1854. Edward Forbes
1855. George James Allman
1870. Sir Wyv. T. C. Thomson
1882. James Cossar Ewart

Professors of Materia Medica since 1768.

1768. Francis Home
1798. James Home
1821. Andrew Duncan, *secundus*
1832. Sir Robt. Christison, Bart.
1877. Thomas Richard Fraser

Professors of Clinical Surgery since 1803.

1803. James Russell
1833. James Syme
1869. Joseph Lister
1877. Thomas Annandale

Professors of Military Surgery since 1806.

1806. John Thomson
1823. Sir George Ballingall
[Chair abolished.]

Professors of Medical Jurisprudence since 1807.

[See Faculty of Law.]

Professors of Surgery since 1777.

1777. Alex. Monro, *secundus*
1798. Alexander Monro, *tertius*
1831. John William Turner
1836. Sir Charles Bell
1842. James Miller
1864. James Spence
1882. John Chiene

Professors of General Pathology since 1831.

1831. John Thomson
1842. William Henderson
1869. W. R. Sanders
1881. William Smith Greenfield

GENERAL COUNCIL OF THE UNIVERSITY.

The Chancellor, the Members of the University Court, the Professors, the Graduates, and all persons who previous to 2d August 1861 had, as Matriculated Students, given regular attendance on the course of study in the University for four complete Sessions, or for three complete Sessions in this, and a fourth in another Scottish University—the attendance for at least two of such sessions having been on the course of study in the Faculty of Arts, are entitled to be registered as Members of the General Council. The fee for registration is £1.

The Register for the current year contains 7154 Members, and is conclusive of the rights of persons to be Members up to 1st January 1894. By the Universities Elections Amendment (Scotland) Act all candidates for graduation are required to pay the Registration Fee before they can be allowed to appear for graduation.

Under the Universities (Scotland) Act of 1858, and the Commissioners' Ordinance No. 1, section 3, following thereon, the Council meets twice a-year—viz., on the *first Tuesday after the fourteenth day of April*, and on the *last Friday in October*, at three o'clock P.M., "*to take into their consideration* all questions affecting the well-being and prosperity of the University, and to *make representations from time to time on such questions* to the *University Court*, who shall consider the same, and return to the Council their deliverance thereon." All proposed improvements in the internal arrangements of the University "shall be submitted to the University Council for their consideration."

By the Universities (Scotland) Act, 1889, in addition to the two statutory meetings above mentioned, the Council "may hold special meetings at the instance of the Chancellor, who shall convene such meetings on a requisition from a quorum of members, and the Council may adjourn any meeting, and may appoint Committees to investigate into and report upon any matter remitted to them or to carry out instructions given to them by the Council." The Universities Commissioners under the last-mentioned Act have fixed the quorum of the General Council at ten for every complete thousand or fraction of a thousand on the register of the members, but this provision does not apply to the statutory half-yearly meetings, or to adjourned meetings.

At the meetings of the General Council, in the absence of the Chancellor, Rector, and Principal, the Chancellor's Assessor, and in his absence the Rector's Assessor shall preside; and in the absence of all of the said officials, a Chairman shall be elected by the meeting, provided that no member of the Senatus shall preside at any meeting of the Council held for the purpose of electing an Assessor or Assessors. The Chairman shall have a deliberative and a casting vote, and in case of an equality of votes at the conclusion of a poll, the Chairman, or any one appointed by the University Court to act for him, shall have a casting vote.

The General Council of this University, and the General Council of the University of St Andrews jointly, return a Member of Parliament.

The *Chancellor* and *four of the Assessors* in the University Court are elected by the Council. The Chancellor holds office for life, and the Assessors for four years from the date of Election. Two of the Assessors retire biennially, but may be re-elected. In the event of a casual vacancy the person elected to fill such vacancy retires from office at the date when the person whom he succeeded would in the ordinary rotation have retired. No member of the Senatus Academicus of any University is entitled to vote or take part in the election of any Assessor of the General Council of that University. The next election of two Assessors will take place at the statutory half-yearly meeting in *October* 1893.

Members of General Council are entitled to the use of the University Library on payment of an annual fee of 10s. 6d., or they may compound for such annual fee by one payment of £5, 5s.

STUDENTS' REPRESENTATIVE COUNCIL.

The Universities Commissioners are empowered to lay down regulations for the constitution and functions of a Students Representative Council in the University, and to frame regulations under which that Council shall be entitled to make representations to the University Court. The Rector may, before he appoints his Assessor, confer with the Students' Representative Council.

MATRICULATION.

University Matriculation consists in the signing of the Sponsio Academica by Students, thus entering their names in the General Roll of Students of the University, and in paying a fee of £1 for the academic year (1st October to 1st October), or a fee of 10s. for a Summer Session (1st May to 1st October). Matriculation is necessary before a Student can enter any of the Classes in the University, excepting certain additional courses after mentioned.

Matriculated Students may be members of any of the four Faculties. They have the privilege of electing the Rector of the University. In case of an equality of votes, the Chancellor, or failing him, the Principal, has the casting vote. Students also enjoy the right of admission to the University Library, and on certain days to the Museum of Natural History. Their names are preserved in the General Album, which is the legal register of attendance at the University.

All Candidates for Graduation in Law, in Medicine and Surgery, and in Science, not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, and who do not propose to attend Classes within the University, must, at the beginning of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having in respect of such payment, a right to the use of the Library of the University.

The following is the Sponsio Academica signed by students on matriculating—

QUOD FAUSTUM FELIXQUE SIT. A. D.——

Ego Universitatis Academicae Edinburgensis Discipulus sinceré ac sancté promitto quod et syngraphâ hac meâ in perpetuum testatum cupio, mihi ante omnia cordi ac curae futurum verae pietatis studium ; me etiam in assuetis academici curriculi studiis sedulum fore, ut adolescentem bene institutum decet ; et quamdiu in illo curriculo permansero praeceptoribus omnibus morigerum memet praestiturum, nec ullius dissidii aut tumultus clam palamve vel auctorem vel participem futurum, et per reliquam vitam Universitatem Academicam Edinburgensem ipsam grato et benevolo animo prosecuturum, idque omnibus officiis pro facultate mea et occasione data testaturum esse.

MATRICULATIONS (1st May 1892 to 1st May 1893).

FOR SUMMER SESSION :—		
I. Faculty of Arts	24	
II. Faculty of Divinity	1	
III. Faculty of Law	14	
IV. Faculty of Medicine	47	
		86
FOR ACADEMIC YEAR :—		
I. Faculty of Arts	936	
II. Faculty of Divinity	78	
III. Faculty of Law	445	
IV. Faculty of Medicine	1,642	
		3,101
Total Matriculations (1st May 1892 to 1st May 1893)		3,187

The Senatus Academicus may, with the approval of the University Court, sanction the admission of persons who are not Matriculated Students of the University to any Course of Lectures in the University not included in the Course of Study for Graduation in any Faculty, on payment to the General University Fund of an Entrance Fee of Five Shillings in addition to the authorised Class Fee ; but such payment shall not entitle such person to any other University privilege. The Courses which at present may be attended under this Regulation are :—

Constitutional Law and History, short additional Courses on.
Engineering, short additional Courses on.
Fine Art, short additional Courses on.
Economic History, short Courses on (in connection with Political Economy).
Civil and Criminal Procedure.
Do. Practical Class.
Mental Diseases.
Diseases of the Eye.
Clinical Instruction on Diseases of Children.
Comparative Embryology.
Forestry.
Agricultural Entomology.
Music Classes.
Practical Pathological Bacteriology.

Other Courses may from time to time be sanctioned under this Regulation.

Students are subject to the disciplinary jurisdiction of the Professors and of the Senatus Academicus. Among offences liable to be visited with severe academic penalties may be mentioned riotous or disorderly conduct within or without the University Buildings, copying at examinations, and mutilating or disfiguring books belonging to the University Library.

UNIVERSITY EXAMINERS.

PRELIMINARY EXAMINATION.

The Professors of or Lecturers on the several subjects (with Professor Eggeling as Examiner in Modern Languages), and five additional Examiners :—

FOR DEGREES.

I. *Faculty of Arts.*—The Examiners for the Degree in Arts are the Professors of or Lecturers on the Subjects (with Professor Eggeling as Examiner in Modern Languages) and fourteen additional Examiners appointed by the University Court, in whose appointment regard must be had to their eminence in the Subjects in which they are appointed to examine. No Professor, Lecturer, or University Assistant or Demonstrator can be appointed an additional Examiner.

II. *Faculty of Divinity.*—The Examiners for the Degree of Bachelor in Divinity are the four Professors of the Faculty, together with two Examiners appointed by the University Court for the term of three years.

III. *Faculty of Law.*—The Examiners for the Degrees of Bachelor of Laws (LL.B.) and Bachelor of Law (B.L.) are the seven Professors of the Faculty, two Examiners selected by the University Court from those who have graduated in Laws.

IV. *Faculty of Medicine.*—The Examiners for Degrees in Medicine are the Professors in the Faculty, with fourteen additional Examiners appointed annually by the University Court.

V. *Degrees in Science.*—The Examiners for Degrees in Science are the Professors of the Subjects, with additional Examiners in each Subject of Examination.

VI. *Schoolmaster's Diploma.*—The Examiners for the Schoolmaster's Diploma are the Professor of Education and an additional Examiner.

VII. *Title of Literate in Arts.*—The Professors of the Subjects, and the additional Examiners for Degrees in Arts, &c.

ANNUAL CEREMONIALS FOR GRADUATION.

The relative precedence of each Faculty is as follows:—1. Divinity; 2. Law; 3. Medicine; 4. Arts. The Deans take precedence in their respective Faculties followed by the Members of their Faculties in the order of the dates of their Commissions.

The Public Ceremonial of Graduation in Divinity, Law, Arts, and Science is held annually in April.

Degrees in Law, Medicine, and Science are publicly conferred on the first of August in each year.

Graduates must appear on these occasions in the Academic Costume proper to their respective Degrees.

ACADEMIC COSTUME.

Chancellor.—Robe of Black Brocaded Satin, trimmed with Gold Lace, and with Gold Frogs down fronts and on sleeves. Black Silk Velvet Trencher, with Gold Button and Tassel.

Vice-Chancellor.—Robe and Trencher same as Chancellor's, but trimmed with Silver in place of Gold.

Rector.—Black Silk Gown, with Crimson Silk Velvet sleeves. The gown is trimmed round the collar and down the front edges with Broad Gold Lace, and the sleeves round bottom with a narrower Gold Lace. Black Silk Velvet Trencher, with Gold Button and Tassel.

Principal.—Mauve Corded Silk Robe trimmed with Velvet to match. Black Silk Velvet Trencher, with Gold Button and Tassel.

Members of University Court.—Black Silk Robe, open sleeve, with Gold Frog on each sleeve.

With all of the above, Hoods appropriate to the Degree are worn.

The ordinary form of Gowns worn by Graduates of the University is the same in all the Faculties—viz., black silk or stuff, with long sleeves. The distinctive part of the costume is in the *Hood* appropriated to each Faculty. These Hoods are as follow:

LL.D.—Black *cloth*, lined with *blue* silk.
LL.B.—Black *silk*, lined with *blue* silk, bordered with white fur.
B.L.—Black *silk*, edged with *blue* silk three inches broad, trimmed with white fur.
D.D.—Black *cloth*, lined with *purple* silk.
B.D.—Black *silk*, lined with *purple* silk, bordered with white fur.
M.D.—Black *cloth*, with appended cape, lined and faced with *crimson* silk.
M.B. and C.M.—Black *silk*, lined with *crimson* silk, bordered with white fur.
Sc.D.—Black *cloth*, lined with *green* silk.
Sc.B.—Black *silk*, lined with *green* silk, bordered with white fur.
M.A.—Black *silk*, lined with *white* silk.

The full Academic Dress for Doctors of Law, Medicine, and Science, is Gown of superfine Scarlet Cloth, loose sleeves, the cape and facings down the front covered, and the sleeves lined, with rich silk of the colour proper to the Degree. Birretum of black silk velvet.

REGULATIONS OF UNIVERSITY COURT.

I.—ABSENCE OF PROFESSORS.

24th Jan. 1887.

1. When any Professor shall be prevented from teaching his Class for more than three successive days, an arrangement shall be made for his Class being taught in his absence; and such arrangement shall be intimated to the Dean of his Faculty.

2. When any Professor has reason to expect that the demands of his Profession may involve absence from duty for more than four days in all in the course of a Session, an arrangement similar to that in Regulation 1 shall be made and intimated to the Dean of his Faculty.

3. No arrangement for teaching a Class in absence of the Professor shall continue longer than one week without the sanction of the Senatus Academicus; or, if there be no sufficiently early meeting of the Senatus, without the *interim* sanction of the Principal and Deans Committee.

4. When any Professor shall contemplate an absence from duty of more than one week, it shall be necessary for him to obtain the sanction of the Senatus for such absence, and for the arrangements for teaching his Class; and if his contemplated absence extend to four weeks or upwards, the sanction of the Senatus shall require the confirmation of the University Court.

5. No Professor shall employ any one other than a Colleague or University Assistant to teach his Class for him, without obtaining the sanction of his Faculty; and such sanction shall be communicated to the Senatus at its first meeting thereafter.

6. The Statement of the arrangements for teaching a Class in the absence of the Professor, submitted to the authorities of the University, shall specify the remuneration proposed to be given to the Professor's Substitute.

II.—ABSENCE OF EXAMINERS.

12th June 1876.

1. Any University Examiner who finds himself prevented from being present at any Examination at which it is his duty to act, shall intimate this to the Dean or other Chairman of his Examining Board, who, on receiving such intimation, or otherwise becoming aware of the absence of the Examiner, shall, if possible, appoint a properly qualified Substitute to act for such Examiner.

2. In every case in which a person is appointed to act as Substitute for a University Examiner, and in which his Faculty, or Examining Committee, shall consider it necessary that the Substitute shall receive remuneration, the rate of remuneration to be paid by the Examiner (whether a Professor or Additional Examiner) to his Substitute shall be fixed by the Faculty, or Examining Committee, and shall be based upon the amount of the Fees payable to the Additional Examiners attached to the Faculty or Examining Committee.

3. All absences of University Examiners, their duration and cause, and the relative arrangements made, shall be immediately reported for approval to the Senatus Academicus by the Chairman of the Board to which the absent Examiner is attached; and a similar Report shall in every case of the absence of a University Examiner be made by the Senatus Academicus to the University Court; provided always that such arrangements shall receive immediate effect when circumstances do not permit the previous approval of the Senatus Academicus to be obtained.

4. In every case in which a Professor shall apply for leave of absence from his duties generally, provision shall be made, under the existing Regulations regarding leave of absence to Professors, for the performance of his duties as Examiner, as well as for the performance of his duties as Teacher; and provision shall be made for the remuneration of his Substitute in both capacities.

III.—APPLICATIONS FOR ADDITIONAL (OR NON-PROFESSORIAL) EXAMINERSHIPS IN THE UNIVERSITY.

17th February 1890.

1. Applicants should lodge sixteen copies of their applications (one of which should be signed), and sixteen copies of any testimonials they

may desire to present, with the Secretary of the Court, not later than one week before the day fixed for making appointments in each case.

2. Applicants who send in testimonials must not send more than four for any one appointment.

3. The days for making appointments to the Additional Examinerships falling vacant in the ordinary course are :—In Arts, on the second Monday of July, for the period commencing on 1st October following ; in Divinity, Medicine, Law, and the Civil Engineering and Agriculture Department of Science, on the second Monday of January in each year, for the period commencing on the 1st of that month ; for Schoolmaster's Diploma, on the third Monday of November.

4. The appointments in Divinity, Arts, Law, the C. E. and Agriculture Departments of Science, and for the Schoolmaster's Diploma, are for three years. The appointments in Medicine are for one year, and the persons appointed may hold office by annual reappointment for a period of five years, but not longer, except under special circumstances.

5. Persons may be appointed to examine in two of the thirteen Subjects of the Examinations for Graduation in Medicine, but not more, and not in more than one Subject in any one Division of the Examinations.

6. Every applicant for an appointment in Divinity must hold the degree of B.D. from a Scottish University.

7. Every applicant for an appointment in Arts must be a member of the General Council of a Scottish University.

IV.—OPENING OF NEW CLASSES.

6th May 1868.

No class in addition to those existing in the University shall at any time be opened,—whether for the purpose of dividing the course on a subject necessary for graduation, or for teaching a class not requisite for graduation,—without the approval of the Senatus and the sanction of the University Court.

V.—RECOGNITION OF EXTRA-ACADEMICAL TEACHERS.

17th Feb. 1890.

1. Every applicant for recognition shall furnish for the information of the Authorities of the University :—

(1.) A Statement of his Registered Qualification or Qualifications, and of the name of the Office, or Appointment (if any) which he holds, as a Teacher of the Subject in which he requests recognition.

(2.) A Syllabus of his Course of Lectures ; or, in the case of a Practical Class, information of a similar kind.

(3.) A Statement of the number of Lectures, and of the number of Written or Oral Examinations in the Course ; or, in the case of a Practical Class, information of a similar kind.

(4.) A Short description of his Accommodation for a Class; and of the Apparatus, Illustrative Specimens, Diagrams, and other appliances, at his disposal for teaching the Subject in which he desires recognition.

(5.) A Statement of his opportunities of studying the Subject, and of the length of time devoted thereto.

(6.) A Statement of the experience he has had in teaching the Subject.

(7.) A Note of the Titles of his published Contributions to the Science of the Subject.

(8.) A Statement as to whether his Course or Courses of Instruction have been already recognised by any University or other examining body, and, if so, what means were adopted for ascertaining his qualifications for teaching.

2. In the case of every Applicant for recognition residing in Edinburgh or its neighbourhood, an inspection shall be made of his teaching Appliances and Accommodation for teaching.

3. Every recognised Extra-Academical Teacher shall annually furnish the University with the information regarding his Course or Courses which is required from the University Professors as to (1.) The number of Students attending the recognised Course or Courses of Instruction; (2.) The number of meetings for ordinary Class Work in the Session, and in each week thereof, excluding meetings which fall under the next head; (3.) The number of Special Written Examinations; (4.) The system of conducting the ordinary Class Work, and the number of meetings devoted to each kind of work.

4. The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the number of those occasions on which the Student was present. The Certificate should also state the general scope of the Course; and, in particular, in the case of Chemistry, that the Course included Organic as well as Inorganic Chemistry; in the case of Midwifery, that it included the diseases of Women and Children; and, in the case of Practical Materia Medica, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

5. In the event of an Extra-Academical Teacher removing from the premises or building occupied by him for teaching a recognised Course, such Teacher shall be required to intimate his removal to the University Court, in order that the Court may have an opportunity of considering whether the accommodation in the building to which he has removed is adapted for the purpose of teaching the Subject in which he is recognised.

6. When application is made for the recognition of a Course taught by two or more Teachers in conjunction, information shall be given of

the share to be taken by each Teacher in such conjoined Course ; and the recognition of such conjoined Courses, and of each of the persons recognised as Teachers of a conjoined Course shall, *ipso facto*, terminate should one or more of the Teachers cease to conduct the Course, or should any material change be made in the share of each Teacher in the teaching of the conjoined Course.

7. The recognition of any Teacher who fails to furnish the information called for in Section 3, or an explanation relative to such failure ; or who has ceased for the period of two consecutive Sessions to teach the subject on which he is recognised shall, *ipso facto*, terminate.

University Buildings.

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THE University Buildings at present consist of three distinct portions: (1) The College, or University (Old) Building, with Dome, in South Bridge Street; (2) The University New Buildings (School of Medicine), Teviot Row; and (3) The Music Class Room, Park Place.

I.—THE UNIVERSITY (OLD) BUILDING.

The University (Old) Building, which covers the site of "Kirk o' Field," the scene of the murder of Darnley, contains the University Library and Reading Rooms; the Class Rooms of the Faculties of Arts, Divinity, and Law, and the Natural History Class Room; the Theological Library and Reading Room; the Examination Hall; the Physical, and the Geological and Petrological Laboratories; the Fulton Engineering Laboratory; the Physical, Geological, Fine Art, and Natural History Museums; the Senate Hall, University Court Room, and the Offices of the Senatus, of the University Court, and of the Students' Representative Council.

The work of teaching began in 1583, but until the latter part of the eighteenth century, the professors and students of the University had been very imperfectly housed. In a Memorial, dated 1768, Principal Robertson complains that the buildings, "poor in themselves, seem not to have been carried on according to any regular plan, such as takes place in other academical structures which have been erected on more opulent foundations; and hence the whole fabric has a mean, irregular, and contemptible appearance." At this time the number of students was estimated to be between six and seven hundred, and the number of professors was twenty-one.

Twenty years later this complaint was repeated by a writer in the "Scots Magazine," who notices that "in 1788 the buildings of the University are in the same ruinous condition that they were in in 1768, and the most celebrated University at present in Europe is the worst accommodated." A scheme for rebuilding, which had been often discussed, was now taken seriously in hand by the Town Council, encouraged by promise of liberal aid from Government. A plan was obtained from Robert Adam, then at the height of his reputation, and the foundation stone of "the New College of Edinburgh" was laid with considerable pomp on November 16, 1789.

The original plans of Robert Adam, preserved in the Soane Museum in London, divide the space now occupied by the College buildings into two quadrangles, a smaller to the east, entered as at present from South Bridge Street, and a larger beyond it to the west, a block of academic buildings lying between. This arrangement was doubtless intended to obviate the difficulties caused by the rapid rise of the ground from north-east to south-west. Round the two courts thus formed there were not only to be Class Rooms, Museums, and a Library, but also houses for the Principal and Professors. The western side of the larger court was to be occupied by a large Graduation Hall and Chapel. Corridors and lobbies were to surround the great quadrangle, affording covered communication between the different class rooms. The buildings were begun at different points, chiefly on the eastern and northern sides, but had not proceeded far towards completion when the death of the architect in 1792, and soon afterwards a failure of funds, caused a cessation of the work. The fabric, partly old and partly new, remained in a very unsatisfactory state till 1815, when a Government Commission was appointed to collect funds and to carry out the undertaking, though in a somewhat modified form. An advertisement was then issued, inviting plans "for finishing the College of Edinburgh, on a reduced scale, leaving out the south front, and the cross building, which formed the small court in the original plan,—regard being always had to the part already executed, and to the preservation of the architecture of Mr

Adam, as far as practicable." Out of nine sets of plans sent in, those of William Henry Playfair were finally selected, and under his superintendence the work progressed rapidly till its practical completion in 1828, by which date the New Buildings had cost in round figures some £161,000.

In the buildings as they appear at present, the general character of the whole design is due to Robert Adam. Some portions were actually erected by him, or completed after his death in accordance with his drawings. In other parts some modification of Adam's plans and elevations was necessary, while the designs of a third portion had to be furnished anew by Mr Playfair, who was careful in both these cases to provide that, in his own words, "the exterior of the buildings would be executed as nearly similar as possible to Mr Adam's design." The eastern exterior front, a very fine specimen of monumental architecture, with its monolithic columns 22 feet in height, was erected by Adam, and it may be noted that in the original drawings for this portion in the Soane Museum a certain amount of sculpture is introduced, which would have greatly enhanced the effect had it been added to the façade. Thus, statues were to have been placed upon the balustrade of the shallow balcony above the portico, one over each of the monolithic columns. Erected, too, by Adam, was the north-west corner of the great court, of which the circular Loggie form an admired feature, while he also carried out a considerable portion of the north front to what is now Chambers Street, and commenced the western block. The principal modification introduced by Playfair was the throwing of the two courts into one, which involved a reconsideration of the north and south interior elevations. Here Adam's plan was departed from, and the present elevations on these two sides are due to his successor. Playfair erected the elevations of the western block after Adam's designs with some very slight improvements ; but the interior treatment of the block, which he fitted up for the Natural History Museums, is his own, and the "Upper Museum," now the Natural History Laboratory, is a good specimen of his style. The "circular corners" which Adam had designed for his great court were retained by Playfair for his single quadrangle, but in order to fit them on at the eastern end, a new screen of masonry was erected on the inner front of the eastern portico. On the exterior, the north front is Adam's, and its comparative plainness is due to the fact that at the time only a narrow lane bounded the College on the side where now runs the broad thoroughfare of Chambers Street. For the south exterior front Adam had given a handsome and ornate design, which was afterwards simplified by Playfair, but is still superior in treatment to the corresponding elevation to the north.

The difficulty of the levels in the quadrangle was overcome by Playfair in a most satisfactory manner. He designed a terrace surrounding the court, under which on the northern and eastern sides is a basement story, while access is gained from the area below by flights of steps. The whole provides a very suitable architectural base for the noble buildings surrounding the quadrangle.

The interior arrangements were considerably modified by Playfair, and his great achievement is the Library Hall, a fine gallery measuring 185 feet by 54 feet, with an arched ceiling enriched with cassettes, the effect of which is, however, marred by insufficient lighting. For all the ornamental details in the Library Hall and the Natural History Museum, Playfair furnished careful full size drawings.

The general effect of the buildings is simple and dignified, and their character thoroughly Academic. The material is mainly Craigleith stone, and the detail carving is well worked out. The single quadrangle, measuring 242 feet 6 inches from east to west, by 134 feet from north to south, has a very spacious effect, and is a great improvement on the original plan of 1789, though, as before remarked, the essentials of the design must be regarded as due to Adam. No finer specimens of the neo-classic style could be found than the interior elevations of the Quadrangle, especially on the west, or the eastern front to South Bridge Street.

THE DOME.

The original design of Robert Adam provided for a Dome over the eastern portal. The form he had sketched out was not, however, a pleasing one, and no steps were taken to carry out this feature until 1883, when funds came into the possession of the University, bequeathed for the purpose of erecting a Dome, by Robert Cox, Esq., W.S. It was then determined to carry out the Dome on a new design prepared by R. Rowand Anderson, Esq., LL.D., Architect of the University New Buildings (School of Medicine). The present Dome, though in a less purely classical style than the Adam-Playfair building, is in itself a pleasing and effective structure, and a welcome addition to the architectural features of the city. An admirable finial to this fine architectural work is formed by a vigorous and athletic figure of Youth, bearing the torch of Knowledge, executed in bronze by John Hutchison, Esq., R.S.A. The Fine Art Museum is accommodated in the Dome.

II.—THE UNIVERSITY (NEW) BUILDINGS.

(SCHOOL OF MEDICINE.)

In 1869 the number of students had risen to more than fifteen hundred, and that of the Professors to thirty-three, while there were seventeen Class Rooms only for their accommodation. A Committee was therefore formed in 1873, and an appeal was made to the public for subscriptions for the purpose of purchasing a site for and erecting complete Class Rooms, Theatres, Laboratories, and Museums for the Faculty of Medicine, with the latest scientific improvements; for reorganising the Class Rooms of the College for the Faculties of Arts, Divinity, and Law; for providing increased and more convenient accommodation for the University Library; for erecting a University Hall for conferring degrees, for holding examinations and other public and academic ceremonials; and for improving to some extent the north front of the College building.

This appeal to the public resulted in subscriptions being received to the amount of £148,548, 2s. 5d., which, with a grant of £80,000 received from Government, and interest, rents, and value received for old material, amounted to the sum of £244,587, 4s. 8d.

These buildings (the University New Buildings, begun in 1878) were partly opened for teaching purposes in October 1880, and having been completed, were transferred by the Committee to the University in October 1888. They are situated on an irregularly shaped site formerly covered by Teviot Row, Park Street, and Park Place, and were designed by R. Rowand Anderson, Esq., LL.D., Architect, and completed under his supervision.

In them are placed the Lecture Rooms, &c., of the Faculty of Medicine (excepting those of Botany and Natural History), the Museums of Practice of Physic, Anatomy, Chemistry, Obstetrics, Materia Medica, and Surgery; a Students' Reading Room, Students' Common Room, Faculty of Medicine Reception and Reading Room, and Office of the Faculty.

The style of architecture adopted by Dr Anderson is Italian of the Cinque Cento period. This style, developed in the end of the fifteenth and beginning of the sixteenth centuries, may be regarded as intermediate between the Gothic and the stiff Palladian work, which aims at a mere manipulation of the five orders; and it naturally commends itself on account of its plasticity and adaptability to varied internal arrangements. The main frontage presents, as its central feature, a slightly projecting elevation, pierced by the archway which forms the principal entrance. Over the arch is an ornate window, flanked by pilasters, between which are niches for statuary; and the whole is surmounted by a bold semi-circular pediment, intended to be occupied with a group of sculpture. The façade is three storeys in height except in the projecting west wing, which has an additional floor. On the ground floor the windows are square, and are surrounded with simply moulded architraves. Above these runs a well-marked string course ornamented with dentils. The first floor windows are round-headed and furnished with architraves, their arches showing boldly in the masonry of the wall. Next comes a broad frieze, relieved at intervals with circular panels, in which carved work will be placed. Over this the string course is repeated ; and the upper floor windows are separated by pilasters, each being divided by a shaft which supports a circular tracery in the window head. The wall is finished at the top with architrave, frieze, and cornice, and crowned with a low-pitched roof, covered with red tiles. The external features and their relative positions have been influenced by the internal arrangements of the building.

THE M'EWAN HALL.

The building which completes the group of the University New Buildings, or School of Medicine, is the M'Ewan Hall, the munificent gift of William M'Ewan, Esq., M.P., Edinburgh. Dr R. Rowand Anderson was also the architect of this building, which stands on the ground formerly occupied by Park Street. The Greek Theatre forms the basis of the design. The internal diameter of the semicircle is 134 ft., and the dimension the other way, including the platform recess, is 107 ft. ; and the height from floor to ring of centre light is 90 ft. On the north-west corner, and connecting the Hall with the present buildings, is placed the Campanile Tower, which is 32 ft. square at the base, and rises to the height of 275 ft. The tower will, in the meantime, only be carried up to the height of the other buildings, but it is hoped that at no distant date this noble part of the design may be completed. At the south-west corner is placed the entrance to the principal staircase, and on the outer circumference of the circle are placed two double stairs for access to the galleries. No fewer than seven entrances to the Hall are provided, so that easy access and speedy exit may be secured. One of the chief of these entrances is in the base of the tower. The Hall is capable of holding 3000 people, and in designing it the architect has had in view the special object which it is intended to serve. In it Degrees will be conferred, and Examinations and all public Academic Ceremonials and Concerts connected with the University will be held. A large platform and ample floor space and gallery accommodation have accordingly been provided. Provision has also been made for the accommodation of a great organ and an orchestra of over 300 performers. The space is apportioned as follows :—A flat area, to be occupied by the Graduands on ceremonial days ; a raised amphitheatre of seats following the sweep of the semicircle, and two galleries, also semicircular in form, rising one above the other. Immediately at the back of the amphitheatre is a vaulted fireproof corridor, 12 ft. wide, extending round the half circle from the north-west to the south-west entrance. Above it is the first gallery. The platform is placed on the straight side of the Hall, and is of ample dimensions, with appropriate seats for the Chancellor, the Rector, the Principal, the University Court, the Senatus, the Curators, &c. The system of construction is really that of the double wall. The inner wall which carries the roof is opened up with pillars and arches from the level of the first gallery, thrusts being transmitted by flying buttresses to the outer wall. The roof is domical in form, is deeply panelled, and pierced at the base with circular lights, and has in the centre a skylight 25 feet in diameter. It will be constructed entirely of steel. From the floor to the roof the Hall will be 90 feet in height, and with its imposing dimensions and tiers of stone pillars and arches, it will be one of the most striking and handsome Halls in the kingdom. The external elevation will conform to the early Italian of the rest of the buildings. The great circle of the Hall is divided vertically by powerful buttresses, while horizontally the lines correspond with those of the west façade. The elevation is divided into three stages ; the first is panelled with circular lights, the second is a blank wall, while the third stage is arcaded—there being three arches between each buttress. On the two principal stages the buttresses have niches for figures. The wall is surmounted by a cornice and balustraded parapet, and above this appears the clerestory, which is carried on the inner circle, while over all rises the domical roof. The Hall was begun in 1889, and will probably be completed in 1894.

III.—REID SCHOOL OF MUSIC.

The School of Music, situated immediately to the south-east of the University New Buildings, was built in the year 1858, from the designs of the late David Cousin. It contains the Music Class Room, with an organ of four manuals and sixty-six stops, enclosed in a handsome carved oak case; and a Museum containing an interesting collection of acoustic and antique musical instruments.

The architecture of the building is studied from the best and purest examples of the Italian Renaissance of the early part of the sixteenth century.

University Library.[1]

THE Library Committee consists of not more than seven members of the University or others, not being members of the Senatus Academicus, appointed by the University Court, and of such number of members appointed by the Senatus Academicus as shall be double the number appointed by the Court. The said Committee shall be charged with the immediate superintendence of the University Library, and of the contents thereof, and of any libraries acquired, or to be acquired, for the use of the University or of any class therein. The members of the said Committee, in the proportions aforesaid, are appointed by the University Court and Senatus Academicus respectively at their first meeting after the commencement of the Winter Session in each year.

LIBRARY COMMITTEE.

The Principal, Sir WILLIAM MUIR, Bart., } *Joint-Conveners.*
Sir THOMAS CLARK, Bart. (*c*)[2], }

Professor EGGELING, *Vice-Convener.*

Professor Crum Brown; James Taylor Brown (*c*)[2]; Professor Charteris; Professor Chrystal; James Avon Clyde, LL.B. (*c*)[2]; James Colston (*c*)[2]; Professor Copeland; Ralph Dundas (*c*)[2]; Professor Cossar Ewart; Professor Flint; Professor Niecks; Professor Goodhart; Professor Goudie; Æneas J. G. Mackay, LL.D. (*c*)[2]; J. Balfour Paul (*c*)[2]; Professor Rutherford; Professor Simpson; Professor Tait.

In 1580 Mr Clement Littil or Little, left his books to "Edinbvrgh and Kirk of God thair to reman." This collection of about 300 volumes, chiefly theological (see list in Miscellany of the Maitland Club, vol i., 1834), was a few years afterwards transferred by the Town Council to the University, and thus became the nucleus of the University Library, which was gradually augmented by donations from Citizens of Edinburgh and from alumni of the University, and by annual contributions of Students when they took the Degree of Master of Arts.

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[1] The names of the present Librarian and of the Assistant Librarians are given at p. 8. The names of the Librarians from 1635 to the present time will be found in previous Calendars, and also in the Historical Appendix to List of Graduates of the University published in 1889, page 113.

[2] Appointed by the University Court.

The celebrated Poet, Drummond of Hawthornden, bequeathed his library to the University in 1627; and the gift is valuable, both from the eminence of the donor's name, and from the rare specimens of early literature with which the collection is enriched (see *Auctarium Bibliothecæ Edinburgenæ*, 1627).

Among donors may be specified, for the extent and value of their benefactions, Principal Adamson, Dr Robert Johnston, a physician in London; the Rev. James Nairne of Wemyss, in Fife; Dr John Stevenson, Professor of Logic and Metaphysics in the University; and Dr William Thomson, Professor of Anatomy in the University of Oxford. In 1872, the Library received a valuable donation from J. O. Halliwell, the eminent Shakespearean critic, of works relating to Shakespeare, collected at great cost. In 1875 a large collection of Persian and Arabic MSS. was presented by Mr J. B. Baillie of Leys. In 1879 the bequest of an extensive collection of MSS. was received from the executors of David Laing, LL.D. In 1880 the collection of works on Economic Science formed by Professor Hodgson were presented to the Library by Mrs Hodgson. In 1882 a valuable collection of works on Sanskrit Literature was presented by the family of Dr John Muir. In 1886 Mr Thomas Stratton bequeathed to the Library 110 works bearing on the study of Celtic. In 1889 William Mackinnon, Esq. of Balmakill, having purchased the library of the late Dr Cameron of Brodick, an eminent Celtic scholar, at a cost of £600, placed the books at the disposal of the University; and the same year saw the bequest of a collection of MS. Shakespeariana by Mr Halliwell-Phillipps, and the presentation, by Mrs Wilson, of a number of volumes from the library of the late Professor Wilson. A "Lorimer Collection," in memory of the late Professor Lorimer and in accordance with his understood desire, was presented by his son-in-law, Sir David Chalmers.

The University Library contains about 184,000 printed volumes, and about 3000 volumes of MSS., many of which are of great interest and value.

The University possesses a number of valuable pictures and busts, which are kept in the Library and the Senate Hall.

The Library Hall, and the suite of rooms connected with it, occupy the south side of the College quadrangle.

The Library is open for the purpose of giving out Books to Readers, either on loan or for reference, every lawful day during the Winter Session, from Ten to Four o'clock, except on Saturdays, when it is closed at One o'clock, and during the Summer Session and Autumn from Ten to Three, and on Saturdays from Ten to Twelve, except as aftermentioned. During the month of August, and during the Christmas vacation and the week in which the Spring Holiday occurs, the Library (not the Reading-Rooms) is open from Ten to One, except on Saturdays and holidays. The holidays are—the Queen's Birthday, Christmas Day, New Year's Day, Good Friday, and the Edinburgh Spring and Autumn Holidays. The Students' Reading-Room is also open during the Winter Session every evening (Saturdays excepted), from Eight to Ten P.M. A special Reading Room has been set apart for the Lady Students; and the general Reading Room is open to them at night.

For Regulations regarding the READING ROOMS (see pages 58 and 59).

The following Regulations, enacted in 1862, relate to the general management of the Library:—

I. The Librarian has the ordinary Management of the Library, subject to the superintendence of the Library Committee.

II. The Librarian and the Assistant Librarians are appointed by the Senatus Academicus, who have the power of suspending or dismissing them, subject to an appeal to the University Court.

III. All books ordered for the Library are sent direct to the

Librarian, and forthwith entered by him in the Catalogue, and noted with distinguishing marks; and no person is allowed to use or borrow any book until it has been entered in the Catalogue, and noted.

IV. The Senatus Academicus, or the Library Committee, have power, from time to time, to make provision for the manner in which the ordinary business of the Library, in regard to borrowing and consulting books, is conducted, by establishing a regular and authentic record of borrowing and returning books on such a system as secures their due return and preservation.

V. The Librarian is required from time to time to prepare a list, to be submitted to, and adjusted and approved by, the Senatus, and when so adjusted and approved, to be kept by the Librarian, of such books, manuscripts, and other works, as ought not to be lent out of the Library, and which shall not be lent out on any terms; and the Senatus make regulations for allowing access to such works for consultation.

VI. The Librarian is required from time to time to prepare a list, to be submitted to, and adjusted and approved by, the Senatus, and when so adjusted and approved, to be kept by the Librarian, of such works as ought not to be lent out of the Library, except upon special application, and by special permission of the Library Committee ; and the Senatus, from time to time, make general regulations as to the conditions under which such works may be borrowed ; and in addition to such general regulations, the Library Committee may, in each individual case of borrowing such works, impose such special conditions as they may think necessary or expedient : Provided always, that every such special permission, and all such additional conditions imposed by the Library Committee, are entered in the Minute-book of the Committee.

VII. A general Inspection of the Library of the University, and of the record kept, as above provided by Section IV., of the borrowing and returning of books, takes place *annually in the second week of October.*

VIII. During the period of the annual Inspection the Library is closed, and all works whatever, and by whomsoever borrowed, must be returned to the Library before the commencement of such period, under a penalty, previously fixed and publicly notified by the Senatus, of not less than one shilling a volume ; and in the event of any volume not being returned before the expiration of one week after the last day of the inspection, the fine is repeated weekly until such volume is returned, or until a copy of the work of the same edition, and of equal value is, at the expense of the borrower, placed in the Library in its stead : Provided always, that the amount of the fine in the case of works borrowed by special permission as aforesaid, may be fixed either by general regulation of the Senatus, or by special condition imposed by the Library Committee in any individual case.

IX. The use of the Library *by persons not being Students of the University* is subject to the following regulations :—

1. Each Member of the Senatus Academicus is entitled to have in his possession, at one time, twenty-five volumes but not more.
2. Each Member of the General Council is, in each year in which he shall have paid a subscription to the Library of ten shillings and sixpence, entitled to have in his possession at one time four volumes, but not more : Provided always, that a payment, instead of such yearly subscription, of a composition of five guineas entitles a person to the like privilege for life. In regard to the use of the Library by Members of the General Council, the year is held to date from the *fifteenth day of October.*
3.[1] In consideration of the Annual payment of five pounds by the Royal College of Surgeons to the University, each

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[1] In abeyance since March 1887.

Fellow of the College resident within ten miles of Edinburgh, is, in each year in which he pays a subscription of one guinea to the Library of that University, entitled to have in his possession at one time ten volumes, but not more. The College of Surgeons and the members thereof, as such are not entitled, in virtue of any former agreement or otherwise, to any privilege or use of the Library, except as herein is specially provided, and as regards such use of the said Library the year is held to date from the *fifteenth day of October*.

4. Subject always to the provision as to the return of books at the annual period of inspection, every person in each of the above classes is entitled to retain each book for one month from the date of borrowing, if the book has been borrowed at any time between the *first day of October* and the *thirtieth day of April inclusive*, and for two months from the date of borrowing, if the book has been borrowed at any time between the *first day of May* and the *thirtieth day of September inclusive;* and further, after the expiration of such period of one month or of two months, as the case may be, he is entitled to retain each book until the annual period of inspection, unless notice is received by him from the Librarian, requiring the return of such book, which notice shall be issued on application being made for the same by any person entitled to the use of the Library, or by order of the Senatus Academicus, or of the Library Committee. The form of notice requires the return of the book within a certain short period, to be specified therein, under a penalty of not less than one shilling a volume, if the book be not returned within such period, and after the expiration thereof, under a further penalty of sixpence a volume for each day, as long as the book is not returned, until the amount of the fine exceeds the sum for which the book can be replaced in the Library, such penalties to be also specified in such notice. In

the event of the Library possessing more than one copy of the book so applied for, and of all the copies being out of the Library, such notice as aforesaid must be sent to the earliest borrower.

X. The use of the Library by *Matriculated Students of the University* is regulated as follows :—

1. Every Matriculated Student is entitled to have in his possession two volumes at one time ; and is entitled to retain any book for two weeks from the date of borrowing ; and further, to re-borrow any book for successive periods of two weeks, unless an application for the same shall, in the meantime, have been made by another person entitled to the use of the Library. It is in the power of the Senatus Academicus, if they shall think it expedient, to allow Students, either generally or during any particular period of the year, to be in possession of more than two volumes at a time.
2. It is in the power of the Senatus Academicus, from time to time, to make such regulations as to a deposit of money by Students borrowing books from the Library, as they may think expedient ; and also to regulate the use of the Library by Students in consulting books in the Library itself.

   [Every Student before borrowing books must exhibit his Matriculation Ticket and at least One Professor's Ticket, and deposit £1 at the Matriculation Office, after which his name will be enrolled in the Library books.]

3. No certificate of attendance upon a class may be granted by a Professor to any Student without the production of evidence to the Professor that the Student has duly returned all books which he may have borrowed from the Library.

XI. Students enrolled by the University of Edinburgh as attending the lectures of extra-academical teachers in Edinburgh (under the sixth sub-section of the sixth section of Ordinance, No. 8, Edinburgh, No. 3), are entitled to the like privileges in connection with the Library of that University, and are subject in the same manner to any regulations to be made by the Senatus, as Matriculated Students of the University; and no certificate of attendance on the lectures of any such teacher may be given to any Student so enrolled without the production of evidence to the teacher that the Student has duly returned all books which he may have borrowed from the Library.

XII. It is in the power of the Senatus Academicus, from time to time, to grant the use of the Library to such extent, and on such conditions, as they may think expedient, to persons for purposes of literary research, and that whether such persons are members of the University or not. But no such privilege can in any case be granted except by minute of the Senatus, specifying the grounds on which the grant is made, and the conditions which have been attached thereto, an extract of which minute must be forthwith transmitted to the University Court.

XIII. All grants of the use of the Library made by the Senatus Academicus, in pursuance of the preceding section, terminate at the annual period of inspection of the Library, but may be renewed under like conditions, if again applied for, on the expiration of that period: Provided always, that the Library Committee may be empowered by the Senatus to renew any such grant until the first meeting of Senatus after the expiration of the annual period of inspection, but no longer.

XIV. In the event of any book being lost or injured while in the possession of a person entitled to the use of the Library, he is liable either to replace the same, or to pay such fine, either as representing the value of the book, or otherwise, as may be fixed by the Senatus Academicus, or by the Library Committee, in the event of their having been empowered by the Senatus to fix the amount of such fines.

XV. So long as any person remains in possession of a book which he is not entitled to retain, or allows any fine incurred by him to remain unpaid, the right of such person to borrow or retain any books whatever, or to exercise any of the privileges of the Library, is suspended and remains in abeyance.

XVI. No book can, in any case, be given out of the Library except to the borrower in person, or to some one having written authority from him.

XVII. On the expiration of the annual period of inspection, the Librarian must report to the Senatus Academicus in reference to the year then ended :—

1. The particulars of every case of admission to special privileges in the use of the Library :
2. The particulars of every case in which a person's right to the use of the Library has been suspended, or is in abeyance :
3. Every case of a book belonging to the Library having been replaced at the expense of a person entitled to the use of the Library :
4. A list of all books belonging to the Library known or found at the time of the inspection to be amissing or seriously injured :
5. Any other matter which the Librarian may think it of importance to bring under the notice of the Senatus, or regarding which the Senatus may have directed him to report :

and the Senatus is required to forward a copy of the Librarian's Report to the University Court with their remarks.

XVIII. At the conclusion of the annual period of inspection, a list is made of all persons who may have failed to return by that time any books borrowed by them, or to pay any fines incurred, along with the names of the books so unreturned, and the amounts of the fines then due ; and this list is exhibited in a conspicuous place in the Library ; and no name may be removed therefrom, until in each case the book or books be returned or replaced, or the fine or fines, which may have become due, be paid.

The following Supplementary Regulations are now in force :—

I. The provision of Sub-section 1 of Section X. of the above Regulations is limited in its application to the use of the Library by Students who are not Graduates of the University; and, as regards such Students, it is in the power of the Senatus Academicus, if they think it expedient, to fix a certain longer period than two weeks from the date of borrowing as the period during which they are entitled to retain books, and that either generally or as applicable to any particular portion of the year, as the Senatus may think expedient. Any such extended period, and also the portion of the year to which the same applies, must be specified in the minute of the Senatus authorising the same, and an extract of such minute must be forthwith transmitted to the University Court.

II. Subject to the preceding Regulations, and specially to the Regulations in Sub-section 4 of Section IX., the following classes of persons are entitled to the use of the Library, to the extent and under the conditions hereinafter specified, that is to say:—

1. Every person who has retired, or who shall hereafter retire, from the office of Principal or Professor on a retiring allowance, is entitled to have in his possession at one time ten volumes, but not more.
2. Any assistant to a Professor, to whom the Senatus Academicus think it expedient to grant the privilege of the Library, is entitled to have in his possession at one time ten volumes, but not more.
3. The Librarian is entitled to have in his possession at one time ten volumes, but not more; and any Assistant Librarian to whom the Senatus Academicus think it expedient to grant the privilege of the Library is entitled to have in his possession at one time four volumes, but not more: Provided always, that all books borrowed by the Librarian, or by any such Assistant Librarian as aforesaid, are duly and regularly entered in the ordinary Records of the Library as being so borrowed, in the same manner as books borrowed by other persons.

READING ROOMS.

I. UNIVERSITY (OLD) BUILDINGS.

There is attached to the Reading Room of the University Library a separate collection of books set apart for the consultation of Students.

Any Student wishing to consult books from this Reading Room Collection must insert in one of the slips provided for the purpose the number of his (or her) Matriculation Ticket, his Name and Residence, and the Title of the Book he may wish to consult, and present the slip to the Librarian in attendance. Each separate Book must be applied for by means of a separate slip.

Each slip so presented will render the person who has signed it responsible for the book named upon it. The counterfoil of slip should, therefore, in each case be re-claimed from the Librarian in attendance, when the Book is returned, or whenever the Book applied for is not available.

Every volume must be returned by the person who has used it, before he leaves the Reading Room. Students are forbidden to leave on the table the Books used by them ; they are required to place them in the Librarian's hands, and to demand back the counterfoils of their slips. To prevent confusion, this should be done a few minutes before the close of each hour by those who have to attend classes at the commencement of the next hour.

In addition to the books in the Reading Room Collection, each Student is allowed to consult in the Reading Room Two Volumes daily from the General Library, provided always that he has handed in on the previous day, before 2 o'clock P.M., slips applying for these two works. The same rules will then apply to such books as to those consulted from the Reading Room Collection.

No conversation, or noise likely to disturb readers, is permitted in the Reading Room.

The Librarian is responsible for the management of the Reading Room. Any point of difficulty that may arise must be referred to him for decision, or, if necessary, through him to the Library Committee.

Every Student, on first applying for books in the Reading Room, must exhibit his Matriculation Ticket for Registration in the Book kept for the purpose in the room.

All books taken into the Room from the General Library shall be carefully examined and returned to their place in the General Library each day. No books shall be issued from the General Library, for use in the Reading-Room, after 3.20 in Winter or after 2.30 in Summer; and all books from the General Library shall be given up in the Reading-Room at 3.45 in Winter and 2.45 in Summer.

The Reading-Room is open every night of the week except Saturday during the Winter Session, between 8 and 10 P.M., and is available for either Gentlemen or Lady Students. Books required from the General Library must be demanded in writing before 3 o'clock.

A Special-Reading Room has been set apart for the Ladies during the day.

II. UNIVERSITY NEW BUILDINGS.

In the University New Buildings is a Students' Reading-Room containing Books of Reference for those attending the Classes in the Faculty of Medicine. The Regulations as to consulting Books are similar to those in the Reading-Room in the University (Old) Buildings. See p. 58. It is open daily, from 9 A.M. to 5 P.M. except on Saturdays, when it is closed at 12 noon. It is open in September and during the week in which the Spring Holiday occurs (Saturday excepted), from Ten to One. It is closed during August and the Christmas Holidays, and on holidays and Saturdays during the Summer vacations.

THEOLOGICAL LIBRARY.

This Library was founded in 1698 for the special use of Students in Theology. It contains above 10,000 volumes. The management, by the amended constitution (1863), is vested in a Committee of six Curators, chosen by ballot, by the Cives of the Library, from their own number. Students of Divinity of this

University, or any who have been Students of Divinity at any Scottish University, are admitted as Cives of the Library on payment of an annual contribution of two shillings and sixpence in the former case, and of five shillings in the latter. No one who, when a Student of Divinity in this University, has failed to enter as a Civis, is in any after year allowed to do so, until he has paid up the arrears of two shillings and sixpence for each year of his Theological Course in which he has failed to pay the said contribution. No Civis can be elected a Curator unless he be at least in the second year of his attendance at the Divinity Hall. The election takes place in the second week of December, one-third of the Curators going out annually by rotation. The Curators elect one of their own number to be Treasurer. The Curators and Treasurer report the state of the funds, &c., to the Cives, the Theological Faculty, and the Senatus Academicus. The books purchased are selected by the Curators, subject to the approval of the Faculty of Divinity, and are restricted to theological works, and works subservient to theological study. The Professor of Divinity, who is *ex officio* Honorary Librarian, appoints annually an acting Librarian. Books may not be kept out of the Library longer than two months.

PORTRAITS AND BUSTS IN THE SENATE HALL, LIBRARY, COURT ROOM, ANATOMICAL MUSEUM, MUSIC CLASS ROOM, AND DOME.[1]

I. PORTRAITS.

There are twenty-seven Portraits of Benefactors, Principals, Professors, and others, by Raeburn, Sir John Watson Gordon, and other Artists, in the Senate Hall, four in the Library, sixteen in the University Court Room, and one in the Music Class Room.

Portrait presented since separate Catalogue was printed.

James Lorimer, M.A., LL.D., Dr Jur., Professor of Public Law (1862-1890), painted and presented by John A. Lorimer, A.R.S.A.

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[1] There is a separate printed Catalogue of the Portraits and Busts in the University, and of the Torrie Collection. A detailed Catalogue will also be found in the Calendar for 1890-91, p. 61, as well as in the previous Calendars.

II. BUSTS.

There are forty Busts in the Upper Library Hall, two in the Anatomical Museum, and one in Room in Dome.

In order to honour and perpetuate the names of Benefactors who have founded Scholarships, Bursaries, or new Chairs in the University, the University authorities have made arrangements for placing their Busts or Portraits in the Library and University Court Room.

Regarding as Benefactors the eminent Professors who have elevated the character of the University by their writings or discoveries, the University desires to procure Portraits or Busts of James and David Gregory, Colin Maclaurin, Matthew Stewart, Dr Cullen, Joseph Black, Dr James Gregory, Dr Alison, Dr Chalmers, Sir Chas. Bell, Lord Woodhouselee, Dr Thos. Chas. Hope, Professors Miller, Ross, Macdougall, Muirhead, Lorimer, Sellar, and Campbell Fraser.

TORRIE FINE ART COLLECTION.

Sir James Erskine of Torrie, by a Will, dated April 1834, bequeathed to the University his Pictures, Bronzes, and Marbles, "for the purpose of laying a foundation for a GALLERY for the encouragement of the Fine Arts." The collection is at present temporarily deposited in the National Gallery until funds can be obtained for its suitable display in the College, and for carrying more fully into effect the intentions of the testator.

The Pictures, forty-five in number, include choice specimens of the works of different Masters, especially in the Flemish and Dutch Schools. The Marbles, seventeen in number, and twenty-three Bronzes, have been chosen with a correct appreciation of the merits of this department, and the whole collection reflects credit on the taste and public spirit of Sir James Erskine.

Museums.

A MUSEUM COMMITTEE, consisting of three members of the University or others, not being members of the Senatus Academicus, appointed by the University Court, and of six members appointed by the Senatus Academicus, is charged with the immediate superintendence of all Museums belonging to the University, and of the contents thereof, and of any collections, furniture, or apparatus, or objects acquired, or to be acquired, for the use of the University or of any class therein. The members of the Committee, in the proportions aforesaid, are appointed by the University Court and Senatus Academicus respectively at their first meeting after the commencement of the Winter Session in each year.

Members of Committee appointed by the University Court.
The Right Hon. the Lord Provost; Patrick Heron Watson, M.D.; John Duncan, M.D.

Appointed by the Senatus Academicus.
Professors Tait, Geikie, Fraser, Greenfield, Sir William Turner, Rutherford.

The University contains the following Museums, several of which belong partly to the Professors of the respective subjects:—

1. The NATURAL PHILOSOPHY MUSEUM contains a large and very valuable collection of physical apparatus, chiefly of modern construction.

2. MUSEUM OF MUSIC AND MUSICAL INSTRUMENTS. — A very interesting and valuable collection of acoustic and antique musical instruments.

3. GEOLOGICAL MUSEUM.—This collection is for class purposes. It exhibits the characters of minerals and rocks, and the typical fossils of the different geological systems.

4. FINE ART MUSEUM.—A small collection of casts, photographs, and drawings, illustrating the main points in the history of classical art. The collection is housed in the Dome above the portal of the University.

5. MUSEUM OF THE ROYAL BOTANIC GARDEN. —This Museum is open to Students.

6. THE PHYSIOLOGICAL MUSEUM.—This museum contains a large collection of Physiological Instruments, Microscopes and Microscopical Appliances, Diagrams, and Preparations, partly belonging to the University and partly to the Professor.

7. PRACTICE OF PHYSIC MUSEUM.—The Practice of Physic Museum contains pathological specimens, drawings, models, diagrams, and charts, the property of the Professor.

8. THE ANATOMICAL MUSEUM.—This Museum was founded in 1800 by Dr Monro, *secundus*, who presented his own Anatomical Collection, and that of his father, to the University, "to be used by his future successors in office for the purpose of demonstrating and explaining to the Students the structure, physiology, and diseases of the human body." In the year 1859, Sir David Monro, M.D., presented a collection of anatomical preparations, which had been formed by his father, Dr Alexander Monro, *tertius*. Numerous additions were also made to the Museum by the late Professor Goodsir, more especially in the department of Comparative Anatomy, and on his death the Senatus Academicus purchased from his representatives his Private Museum, which has been added to the Collection. The Museum now contains several thousand specimens in illustration of Human Anatomy, both normal and pathological, and of Comparative Anatomy.

The Conservator will be glad to receive contributions of rare and interesting specimens from Graduates and former Students of the University. He is especially desirous of making the collection thoroughly representative of the osteology of the different Races of Men, and requests the gift of skulls and other bones of the skeleton from present and former pupils.

The Collection was transferred in the Session 1884-5 to the University New Buildings for the School of Medicine in Teviot Row, where it is arranged in a large and handsome Hall possessing two galleries. It is open at certain hours to all matriculated students. The pathological collection is placed in the upper gallery. The spirit-preparations in illustration of normal Human and Comparative Anatomy are arranged in the lower gallery. The osteological collection is disposed in the cases on the floor of the Museum, and suspended in the centre of the Hall. In 1887 the Henderson Trustees committed to the custody of the Conservator of the Museum their valuable collection of crania and casts.

Conservator of the Museum, the Professor of Anatomy; Assistant-Conservator, Mr James Simpson.

9. CHEMISTRY MUSEUM.—Sir Lyon Playfair, on his resignation of the Chair of Chemistry, presented to the University the collection of chemical substances which he used in illustrating his lectures. This collection has been from time to time increased by presents from chemical manufacturers and others, and also by the addition of substances prepared in the University Laboratory.

10. THE OBSTETRICAL MUSEUM.—With the exception of a few wet and dry preparations left by Professor Hamilton, contains instruments, preparations, models, and diagrams, collected by Sir James Y. Simpson, and added to by the present Professor of Midwifery, to whom they belong.

11. THE MUSEUM OF NATURAL HISTORY.—The old Museum of Natural History was established in 1812 in connection with the University. It contained Zoological, Geological and Mineralogical Collections. The greater portion of it was formed by the exertions of Professor Jameson, who was for fifty years Professor of Natural History and Regius-Keeper of the Museum. In 1854 the Museum was transferred by the Town Council, at that time

the Patrons of the University, to Government, under whose control it has since continued, and the whole of the collections were at that time removed from the rooms occupied by them in the University to the Natural History Department of the New Museum of Science and Art. They are still, however, available for the educational purposes of the University, and are freely accessible to the Students attending the classes of Natural History and Geology.

A Zoological Museum is now being formed in the University. Graduates, former Students and others interested in the Natural History Department will greatly aid in this important undertaking by presenting specimens to the Keeper—the Professor of Natural History.

12. MATERIA MEDICA MUSEUM. — The Materia Medica Museum contains one of the most complete collections of medicinal and food substances in this country. The collection was founded by Professor Andrew Duncan. His successor, Sir Robert Christison, during his long incumbency of the Professorship, added a large number of valuable specimens, which were, for the most part, mounted by himself with singular neatness. The present occupant of the Chair has made further extensive additions. The Museum has been greatly enriched by interesting donations to the Professor from former members of the Class in all parts of the world. Besides the general collection, there is a Students' Reading Museum, containing specimens of the medicinal substances usually employed in this country, which has been formed and arranged by the present Professor of Materia Medica.

13. SURGICAL MUSEUM.—This collection was formed by the late Professor Spence, and has been largely extended by the present Professor, to whom it now belongs. During the last five years many additions have been made, both of pathological preparations and of plaster and gelatine casts, illustrative of Surgical Anatomy and Pathology. A complete catalogue may, on application, be consulted by practitioners of medicine.

THE ROYAL BOTANIC GARDEN AND ARBORETUM.

The Royal Botanic Garden and Arboretum, Inverleith Row, is connected with the University, in so far as the Professor of Botany delivers his Lectures in the Lecture-hall in the Garden. The grounds extend to about 60 acres, and there is an extensive range of Greenhouses and Hothouses, with a large Palm-house. There is an arrangement of herbaceous plants according to the Natural System.

The Garden is open daily. Specimens of plants for study are supplied to Students so far as practicable.

The Botanical Museum in the Garden is open daily to Students, and the University Herbarium, which is placed in the Garden, may also be consulted between the hours of 10 and 1, and 2 and 5, under the direction of the Professor or the Curator.

The Botanical Laboratory in the Garden is open daily for work and original research.

I.

FACULTY OF ARTS

(INCLUDING THE DEPARTMENTS OF LANGUAGE AND LITERATURE, MENTAL PHILOSOPHY, SCIENCE, AND HISTORY AND LAW.)

1893-4.

Dean.

PROFESSOR CHRYSTAL, LL.D.,
5 *Belgrave Crescent, Edinburgh.*

Programme of Classes.

SUMMER SESSION, 1893.

Students who do not intend to Graduate in Arts may attend any of the Classes in the Faculty, on payment of the Matriculation and Class Fees only, and without having passed any Preliminary Examination. Those who intend to Graduate must pass the Preliminary Examination before attendance on any Class will count for Graduation. The Classes in the Faculty of Arts are now open both to men and women, except in the case of a few classes in which provision has not yet been made for teaching women.

The Classes will be opened as follows, and will be closed on Friday, 21st July.

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees. £	s.
FACULTY OF ARTS.				
Senior Latin (Graduation Half-Course),	2 May, 9 o'cl.	F. R. Jamieson, M.A.	2	2
Senior Greek (Graduation Half-Course),..	2 May, 10 ,,	A. D. Thomson, M.A.	2	2
English Literature from the time of Dryden, 25 Lectures, *Tues.*, *Thurs.*, *&* *Fri.*[1] ...	2 May, 12 ,,	G. Gregory Smith, M.A.	2	2
Senior Mathematics (Graduation Half-Course),...............	2 May, 11 ,,	Chas. Tweedie, M.A., B.Sc.	2	2
Ancient Philosophy (Honours Half-Course, *Mon.*, *Wed.*, *&* *Fri.*),.............	3 May, 11 ,,	R. P. Hardie, M.A.	2	2
Psychology (Honours Half-Course, *Mon.*, *Wed.*, *Fri.*),.........	3 May, 12 noon	C. M. Douglas, M.A., D.Sc.	2	2
Physics (*mainly for Students of Medicine*).....................	2 May, 12 ,,	Prof. Tait.	3	3
Physical Laboratory......	2 May, 10 o'cl.	Prof. Tait and Assistant.	2	2

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[1] On Friday, or another day by arrangement, during a part of the Session.

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees.
Sanskrit	2 May, 3 o'cl.	Prof. Eggeling,	£3 3
Engineering Field-Work (Surveying, Levelling, &c.)	20 June, 9.30 ,,	Prof. Armstrong,	3 3
Geology (*Mon.*, *Wed.*, *Fri.*) Field Demonstrations *on Saturdays*	3 May, 4 ,,	Prof. Geikie,	3 3
Forestry[1]	2 May, 9 ,,	Col. F. Bailey, R.E.	2 2
Elementary Hebrew[2]	2 May, 10 ,,	Prof. Dobie and Assistant.	2 2
Elementary Arabic	2 May, 11 ,,		
Constitutional Law and History[3]	12 May, 5 ,,	Professor Kirkpatrick.	3 3
Practical Chemistry	2 May, 2 ,,	Professor Crum Brown.	3 3
Chemistry (Organic) Advanced Class (*Tues.*, *Wed.*, *and Thurs.*)	2 May, 1 ,,		2 2
Zoology (Elementary)[4]	2 May, 1 ,,	Prof. Ewart	4 4
Do. (Advanced)	2 May, 3 ,,		2 2
Practical Zoology (Elementary)	2 May, ,,		2 2[6]
Practical Zoology (Advanced)	2 May, ,,		3 3[6]
Botany[5]	2 May, 8 ,,	Prof. Balfour	4 4[7]
Practical Botany Field Demonstrations on *Saturdays*	2 May, 9 ,,		2 2

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[1] Half-Course. The other half is given in the Winter Session. Fee for whole Course, £3, 3s.

[2] To prepare Students for entering the Junior Class in Winter Session.

[3] Qualifies for Graduation in Law and as a Half-Course for Graduation in Arts.

[4] With Practical Zoology a full Course, but the whole Course must extend over at least 75 separate days.

[5] With Practical Botany a full Course, but the whole Course must extend over 75 separate days.

[6] Besides charge of 10s. for Laboratory Expenses.

[7] Besides Garden Fee of 5s.

TUTORIAL CLASSES.

These Classes commence on Tuesday, 2nd May, and close on Friday, 21st July.

Classes.	Hours.	Professors' Assistants.	Class Fees.
Junior Humanity (Preliminary Class).........	10–11	Francis R. Jamieson, M.A., Lecturer on Latin Literature.	£2 2
Third Humanity (Advanced Class............	11–12		
Junior Greek (Preliminary Class).............	11–12	A. Douglas Thomson, M.A., Lecturer on Greek Literature.	2 2
Third Greek (Advanced Class).............	9–10		
Junior Mathematics (Preliminary Class) ...	12–1	Chas. Tweedie, M.A., B.Sc., Lecturer on Pure Mathematics.	2 2
Advanced Mathematics.	10–11		
Advanced Natural Philosophy..........	9–10	William Peddie, D.Sc.	2 2

The JUNIOR CLASSES are intended to meet the wants of Students who are preparing for the Preliminary Examination to be held in October next, and the work to be done will be selected with that end in view.

ADVANCED CLASSES in LATIN and GREEK will be formed for the reading of the more difficult authors. The books to be taken up will be chosen to suit those preparing for Classical Honours and for University Scholarship Examinations.

In the ADVANCED CLASS of MATHEMATICS the Lectures will deal with Determinants and Theory of Equations (knowledge of which is assumed in the Advanced Winter Course), Analytical Geometry, Differential and Integral Calculus.

In the JUNIOR CLASS of MATHEMATICS the Lectures will, so far as is expedient, cover the same work as in the corresponding Winter Course.

NATURAL PHILOSOPHY.—The Advanced Course is intended for Students who are preparing for the Intermediate Honours, or the Advanced Honours, Winter Courses; or for the corresponding Arts or Science Degree Examinations. Special attention will be devoted to the working of examples. The hour of meeting may be altered to suit the requirements of Students; and, should a sufficient number of Students studying for the Engineering Degree present themselves, a separate Class may be formed for them.

WINTER SESSION, 1893-94.

The classes will be opened as follows, and will meet daily (*Saturdays excepted*), *unless otherwise stated. They will meet for the last time before the Christmas vacation on Friday, 22nd December; will re-assemble on Tuesday, 9th January* 1894, *and will be closed on Friday, 30th March* 1894. *The Annual Graduation Ceremonial in Arts, &c., will be held on Friday, 13th April* 1894.

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
I.—DEPARTMENT OF LANGUAGE AND LITERATURE.			
Junior Latin..........	17 Oct., 9 o'cl. & also on Mon. & Wed. 11 o'cl.	Prof. Goodhart	£3 3
Senior Latin............	17 Oct., 10 ,,		3 3
Honours Latin.........	19 Oct., 12 ,,		3 3
Junior Greek........	17 Oct., 10 ,, & also on Tues., Thurs., & Fri., 11 o'cl.	Prof. Butcher	3 3
Senior Greek	17 Oct., 11 o'cl.		3 3
Honours Greek	19 Oct., 9 ,,		3 3
English	17 Oct., 4 ,,	Prof. Masson.......	3 3
Sanskrit (Junior Class)	24 Oct., 3 ,,	Prof. Eggeling	4 4
Do. (Senior Class)	24 Oct., 4 ,,		4 4
Hebrew (Junior Class)	1 Nov., 1 ,,	Prof. Dobie......	3 3
Do. (Senior Class)	1 Nov., 2 ,,		3 3
Arabic	9 Nov., 3 ,,		3 3
Syriac[1] *Tues. & Th.*	9 Nov., 4 ,,		2 2
Celtic....................	31 Oct., 4 ,,	Prof. Mackinnon..	2 2[2]
Do. Advanced, *Mon. & Fri.*.......	6 Nov., 3 ,,		1 1
Gaelic Class (*Tues., Wed., Thurs.*)....	7 Nov., 3 ,,		1 1
II.—DEPARTMENT OF MENTAL PHILOSOPHY.			
Logic & Psychology...	17 Oct., 1 o'cl.	Prof. Seth	£3 3
Metaphysics and Hist. of Philosophy (Honours Class (*Mon. Thur.*)	23 Oct., 3 ,,		2 2[3]

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[1] On Tuesdays and Thursdays there will be a Tutorial Class in Arabic.

[2] For Lectures only, £1, 1s.; when taken as a Graduation Course, £3, 3s.

[3] When taken as a Graduation Course, £3, 3s.

WINTER SESSION, 1893-94—*Continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
II.—DEPARTMENT OF MENTAL PHILOSOPHY—*continued.*			
Moral Philosophy	17 Oct., 2 ,,	Prof. Calderwood	3 3
Do. Honours Class (*Wed.*, *Fri.*)	25 Oct., 3 ,,		2 2[1]
Political Economy[2]	17 Oct., 5 ,,	Prof. Nicholson	3 3
Education (Theory, History, & Art of)	18 Oct., 3.10 ,,	Prof. Laurie	3 3
Philosophy of Law[3] (45 *Class Meetings*)	23 Oct., 3 ,,	Prof. Sir Ludovic Grant, Bart.	2 2
III.—DEPARTMENT OF SCIENCE.			
Junior Mathematics	17 Oct., 12 o'cl.	Prof. Chrystal	3 3
Senior Mathematics	17 Oct., 9 ,,		3 3
Mathematics, Intermediate Honours	23 Oct., 11 ,, (*Mon.*, *Wed.*, *Fri.*)		3 3
Do. Advanced Honours	17 Oct., 10 ,, (*Mon.*, *Wed.*, *Fri.*)		3 3
Natural Philosophy	17 Oct., 11 o'cl.	Prof. Tait	3 3
Do. (Advanced Honours)	25 Oct., 12 ,,		3 3
Physical Laboratory	6 Nov., 10 ,,		2 2
Natural Philosophy (Intermediate Honours)	18 Oct., 9 ,,	Cargill G. Knott, D.Sc.	3 3
Dynamics, Advanced Science	18 Oct., 10 ,,		3 3
Astronomy (*Mon.*, *Tues.*, *Thurs.*)	25 Oct., 11 ,,	Prof. Copeland	3 3
Chemistry, with	10 Oct., 10 ,,	Prof. Crum Brown	4 4
Practical Chemistry	4 Dec., 11 & 2 ,,		3 3
Zoology[4]	10 Oct., 12 ,,	Prof. Ewart	4 4
Do. (Advanced)	10 Oct., 3 ,,		2 2
Practical Zoology (Elementary)	10 Oct., 11 ,,		2 2[5]
Practical Zoology (Advanced)	12 Oct., 1.30 ,,		3 3[5]

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[1] When taken as a Graduation Course, £3, 3s.

[2] This Course up to Christmas qualifies for Economics for the B.Sc. in Agriculture.

[3] Half-Course.

[4] With Practical Zoology, a full Course, but the whole Course must extend over at least 75 separate days.

[5] Besides charge of 10s. for Laboratory Expenses.

WINTER SESSION, 1893-94—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.	
III.—DEPARTMENT OF SCIENCE—*continued.*				
Botany[1]	10 Oct., 2 o'cl.	Prof. Balfour	£4	4[2]
Practical Botany (Elementary)	10 Oct., 3 ,,		2	2
Practical Botany (Advanced)	10 Oct., 11 ,,		3	3
Geology	17 Oct., 4 ,,	Prof. Geikie	4	4
IV.—DEPARTMENT OF HISTORY AND LAW.				
History	17 Oct., 2 o'cl.	Prof. Kirkpatrick	3	3
Ecclesiastical History.	... ...	Prof. Taylor	...	
Archæology and Art (History of)	17 Oct., 2 ,,	Prof. Baldwin Brown	3	3
Constitutional Law and History[3]	(In Summer at 5 o'clock.)	Prof. Kirkpatrick	3	3
Roman Law	17 Oct., 4 o'cl.	Prof. Goudy	3	3[4]
History of Roman Law (44 *Class Meetings*)	... ...		2	2
Public International Law (45 *Class Meetings*)[3]	9 Jan., 3 ,,	Prof. Sir Ludovic Grant, Bart.	2	2
V.—MUSIC.[5]				
1. History of Music (20 Lects., *Thurs.*)	26 Oct., 3 o'cl.	Prof. Niecks	1	1
2. Harmony, Melody, and Rhythm (40 Lectures, *Tues. & Fri.*)	27 Oct., 3 ,,		2	2
3. Advanced Harmony, Melody, and Rhythm, and Counterpoint (40 Lectures, *Tues. and Fri.*)	27 Oct., 4 ,,		2	2
4. Theory of Music (20 Lectures, *Mon.*	30 Oct., 3 ,,		1	1

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[1] With Practical Botany, a full Course, but the whole Course must extend over at least 75 separate days.

[2] Besides Garden fee of 5s.

[3] Half-Course.

[4] Fee for both Winter and Summer, £5, 5s.

[5] Five shillings University Entrance-fee for non-matriculated students.

WINTER SESSION, 1893-94—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.	
VI.—AGRICULTURE.				
Agriculture & Rural Economy	18 Oct., 9 o'cl.	Prof. Wallace	£4	4
Economics as applied to Agriculture[1]	17 Oct., 5 ,,	Prof. Nicholson	1	1
Forestry (*Tues.*, *Wed.*, and *Thurs.*	25 Oct., 4 ,,	Colonel Bailey, R.E.	2	2[2, 4]
Agricultural Entomology (Twenty Lectures)	9 Jan., 2 ,,	W. Fream, B.Sc. (Lond.)	2	2[3, 4]
VII.—ENGINEERING.				
Engineering	2 Nov., 9 o'cl.	Prof. Armstrong	4	4
Do., Short Additional Course	10 Jan., 1 ,,		1	1
Geometrical & Mechanical Drawing	3 Nov., 10-2 ,,		3	3
Sanitary Engineering and Drawing	8 Nov., 10 ,,		3	3
Dynamics (Advanced).	18 Oct., 10 ,,	Cargill G. Knott	3	3

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[1] Class of Political Economy up till Christmas qualifies for Economics (see p. 73).

[2] Half-Course. The other half is given in Summer. Fee for whole Course, £3, 3s.

[3] Free to all present and past students of the Agricultural Class.

[4] Five shillings University Entrance-fee.

The following means are afforded for Practical Instruction :—

LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

The ROYAL OBSERVATORY is open to Students of Practical Astronomy on Friday evenings from 8 P.M.

The CHEMICAL LABORATORIES (distinct from the Practical Chemistry Room), completed in 1885, contain accommodation for forty Students. The Laboratories are fitted with all necessary apparatus for chemical analysis and research, open daily, under the superintendence of the Professor, assisted by Leonard Dobbin, Ph.D., and Theodore Rettie, B.Sc.[1]

ZOOLOGY LABORATORIES, for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, M.Sc., Ph.D.[1]

ROYAL BOTANIC GARDEN and BOTANICAL LABORATORY.—These, as well as the Herbarium, with which is incorporated the Collection of dried plants belonging to the University, are used by University Students for the practical study of plants and for botanical research, and are open daily, under the superintendence of the Professor.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals and Rocks, is open on Mondays, Wednesdays, and Fridays from 2 to 4, under the superintendence of Professor Geikie.

MATRICULATION FEES.

For the Academical Year, 1st October to 1st October, .	£1	0	0
For the Summer Session only, 1st May to 1st October, .	0	10	0
University entrance-fee in lieu of Matriculation for each of certain short Courses (see Class Lists), ...	0	5	0

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[1] Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

The Curriculum in Arts.[1]

COURSES OF LECTURES.

I.—*Department of Language and Literature.*

I. HUMANITY—(Latin).

PROFESSOR GOODHART.

Junior Class—Will be taught by the Assistant, under the supervision of the Professor. 9 to 10 o'clock five days a week, and on Mondays and Wednesdays, 11 to 12.

The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Ovid, or Tibullus, Livy, Sallust, and Cicero;—
2. Lectures on Roman History or Literature;—
3. Exercises in Latin Prose Composition;—
4. Translation of passages from Latin into English, and from English into Latin "at sight."
5. Written Examinations.

Books recommended.—Bradley's Arnold's Latin Prose. Allen's Second Latin Exercise Book. Mommsen's History of Rome, abridged by Bryans and Hendry. Wilkins' Primer of Roman Literature. Wilkins' Primer of Roman Antiquities.

During the Winter Session 1893-94 the following books will be read:—Livy, Bk. XXIV.; Cicero, *Pro Milone;* Virgil, *Æneid*, Bk. VII.; Horace, *Odes*, Bk. II.; *Epistles*, Bk. I.

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[1] The annual amount payable for Matriculation, Class Fees, &c., of the regular Course in Arts may be estimated at about £10, 10s.

Senior Class—10 to 11 five days a week.

This is the class which qualifies for the ordinary Degree of M.A.

The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Cicero (*Letters* or *Speeches*), Tacitus ;—
2. Lectures on Roman History or Literature ;—
3. Weekly Exercises in Latin Prose ;—
4. Written Examinations.

Books recommended.—The New Latin Primer (Postgate and Vince) ; Pott's Hints towards Latin Prose Composition ; Mommsen's History of Rome, abridged by Bryans and Hendry ; Cape's Early Empire ; Cruttwell's History of Latin Literature.

During the Winter Session 1893-94, the following books will be read :—Horace, *Satires*, Bk. I. ; Juvenal, *Sat.*, X. ; Tacitus, *Agricola.*

Third (*Honours*) *Class*—12 to 1.

The Third (Honours) Latin Class meets four days a week. It is intended to assist the studies of Candidates for University Scholarships and Graduation with Honours.

The work of the Class consists of—

1. Readings and explanations of some of the more difficult Latin Authors, such as Tacitus, Lucretius, Plautus, Martial, &c.;—
2. Lectures on Roman History and Literature, chiefly in connexion with the Books read in the Class ;—
3. Essays on questions arising out of the Lectures or Books read, and Exercises in Latin Prose Composition ;—
4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

During the Winter Session 1893-94, the following books will be read :—Plautus, *Rudens;* Propertius (Postgate's Selections); Martial (Sellar & Ramsay's Selections) ; Tacitus, *Histories*, parts of Bks. I.-IV.

Senior Class in Summer Session 1893—9 to 10 five days a week.

FRANCIS R. JAMIESON, M.A., *Lecturer.*

This Class qualifies as a half-course for Graduation.

The work of the Class consists of—

1. The reading of the Latin authors prescribed for the Degree Examination in October 1893 and April 1894.
2. Lectures on Roman Literature, chiefly bearing on the authors read.
3. Lectures on Roman History, treating of the period prescribed for the Degree Examination.
4. Exercises in Latin Prose Composition.
5. Written Examinations on the work done in the Class.
6. Translation of passages from Latin into English, and from English into Latin "at sight."

II. GREEK.

PROFESSOR BUTCHER.

Junior Class—Will be taught by the Assistant, under the supervision of the Professor. 10 to 11 o'clock five days a week, and 11 to 12 on Tuesdays, Thursdays, and Fridays.

The work of the Class consists of—

1. Readings of some Greek author, as Xenophon, Lucian, Plato (an easy dialogue), Homer, Euripides, or Aristophanes (selections).
2. Lectures on Greek History or Literature.
3. Exercises in Greek Prose Composition.
4. Translation of Unseen Passages.
5. Written Examinations.

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax; F. E. Thompson's Elementary Greek Syntax; Clyde's Greek Syntax; Jebb's Primer of Greek Literature; Peile's Primer of Philology; Fyffe's Primer of Greek History; Cox's General History of Greece, or W. Smith's History of Greece, or Oman's History of Greece.

Senior Class—11 to 12 five days a week.

This is the Class which qualifies for the Ordinary Degree of M.A.

The work of the Class consists of—

1. Readings of some Greek author, such as Thucydides, Demosthenes, Herodotus, Plato; Homer; a play of Æschylus, Sophocles, Euripides, or Aristophanes.
2. Lectures on Greek Literature, History, or Philosophy.
3. Greek Prose Composition, or Translation of an Unseen Passage once a week, and a Lecture on the passage when the exercises are returned.
4. Written examinations on the work done in the Class, and on subjects prescribed for voluntary reading.
5. Greek Verse Composition (voluntary).

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax; Goodwin's Greek Moods and Tenses; Greek Syntax, by F. E. Thompson; Sidgwick's Greek Prose Composition; Jebb's Primer of Greek Literature; Müller & Donaldson's History of Greek Literature; Jevon's History of Greek Literature, or Mahaffy's History of Greek Literature; Cox's General History of Greece, or W. Smith's History of Greece, or Oman's History of Greece; Greek Verse Composition (Sidgwick and Morris); An Introduction to the Comparative Grammar of Greek and Latin, by King and Cookson.

During the Winter Session 1893-94, the following books will be read:—Aristophanes' *Acharnians* (Merry's Edition); Demosthenes on *The Chersonese* and *Philippic*, III.

The subject for Private Readings will be Euripides, *Bacchae*, Tyrrell's Edition.

Third (*Honours*) *Class*—9 to 10.

The Third (Honours) Greek Class meets four days a week. It is intended to assist the studies of Candidates for University Scholarships and Graduation with Honours.

The work of the Class consists of—

1. Readings and explanations of some of the more difficult

Greek Authors, such as Thucydides, Demosthenes, Plato, Aristotle, Æschylus, Pindar, &c.

2. Lectures on Greek Literature, History, or Philosophy.
3. Greek Composition and Translation of Unseen Passages.
4. Occasional Critical Papers and Essays.
5. Written Examinations on the work done in Class, and on subjects prescribed for voluntary reading.

During the Winter Session 1893-94, the work of the Class will be Æschylus, *Eumenides;* and Aristotle, *Poetics.*

The subject for Private Readings will be Polybius (History of the Achaean League), Capes' Edition.

Senior Class in Summer Session 1893—10 to 11 five days a week.

A. DOUGLAS THOMSON, M.A., *Lecturer.*

This Class qualifies as a half-course for Graduation.

The work of the Class consists of—

1. The reading of the Greek authors prescribed for the Degree Examination in October 1893 and April 1894.
2. Lectures on Greek History or Literature.
3. Greek Prose Composition, and Translation of Unseen Passages.
4. Written Examinations.

OPTIONAL HONOURS COURSES.

For Honours Courses on Comparative Philology and Classical Archæology, see under Sanskrit and Comparative Philology, and Fine Art respectively.

III. RHETORIC AND ENGLISH LITERATURE.

PROFESSOR MASSON.

The business of the Class will comprehend :—

I. Till about Christmas, two parallel courses of Lectures: one on the Principles of English Style and Composition, with the relative portions of the Ancient Rhetoric; the other on the Literary History of the British Islands as far as to 1250, with special attention to the Anglo-Saxon Literature, and with a view of the History of the English Language from its Anglo-Saxon stage to the beginnings of the present English.

II. From about Christmas to the end of the Session, a Course of Lectures on the History of English and Scottish Literature from 1250 to the present time: divided into Periods thus:—(1.) From 1250 to 1400, ending with Chaucer, Langland, and Barbour; (2.) From 1400 to 1580, including the English Poets from Lydgate to Wyatt, Surrey, and Sackville, and the Scottish Poets from James I. to Dunbar, Gavin Douglas, and Lyndsay; (3.) From 1580 to 1625, called "The Elizabethan Period," and including Spenser, Bacon, Shakespeare, and their Contemporaries; (4.) From 1625 to 1688, or the Period of Milton and Dryden; (5.) From 1688 to 1789, or from Dryden to Cowper and Burns, called generally "The Eighteenth Century"; (6.) From 1789 to the present time, or from Wordsworth and Scott to Tennyson and Browning. Under each period there will be a synopsis of its principal poets and prose-authors; the lives and writings of the more important of these will be reviewed more at large; and the general aim will be to exhibit the successive movements and variations of our Language and Literature in their connexions with the course of our National and Social History.

III. Instruction in English Composition, &c. During part of the Session one of the meetings in each week will be devoted to practical work of various kinds, including brief written exercises to be done by the Students in the Class-room. Subjects will also be prescribed for more extensive Essays to be written at home. There will be Prizes for merit in Essay-writing, in addition to the general Class-Prizes.

Text-Books and Books recommended.—Bain's "English Composition and Rhetoric"; Hodgson's "Errors in the Use of English"; Morley's "First Sketch of English

Literature"; Chambers's "Cyclopædia of English Literature"; "Three Centuries of English Poetry"; Morris's "Historical Outlines of English Accidence"; Sweet's "Anglo-Saxon Reader."

Summer Session, 1893.

G. GREGORY SMITH, M.A., *Lecturer.*

A course of Twenty-Five Lectures on English Literature from the time of Dryden, being an historical and critical exposition of the literary principles of the Eighteenth Century.

Books recommended for reference.—Leslie Stephen's English Thought in the Eighteenth Century, Vol. II. ch. xii.; Gosse's Eighteenth Century Literature; Ward's English Poets, Vol. III.

IV. SANSKRIT AND COMPARATIVE PHILOLOGY.

PROFESSOR EGGELING.

A.—SANSKRIT LANGUAGE AND LITERATURE.

1. *Junior Class.*—Grammar and Exercises. Easy Sanskrit Texts (from Lanman's Reader). Easy translations from English into Sanskrit.

2. *Senior Class.*—Repetition of Grammar. Translations from English into Sanskrit. Sanskrit Texts, such as Kālidāsa's Raghuvanśa or Sakuntalā; Mricchakatikā; Manu's Institutes of Law; selected Hymns of the Rigveda (Lanman's Reader).

The Senior Sanskrit Class will be the Graduating Class in Sanskrit for the Ordinary Degree of Master of Arts; and any student who desires to attend this Class with a view to Graduation in Arts must previously pass an examination in accordance with Sect. IV., subs. 3 of the Ordinance.

The examination will include plain passages for translation from and into Sanskrit, and grammatical questions.

Those who propose, in a subsequent session, to take up Sanskrit as one of their graduation subjects will have an opportunity of attending the Junior Class in that language during the Session 1893-94.

B.—COMPARATIVE PHILOLOGY.

During the Session 1894-95, the Professor will be prepared to deliver a course of Fifty Lectures on the Principles of Indo-European Philology and the history of Linguistic Studies. This course will qualify as one of the optional Honours Classes in connection with Classical Honours.

V. HEBREW AND ORIENTAL LANGUAGES.

PROFESSOR DOBIE.

A.—HEBREW.

Junior Class—1 to 2.

Grammar and Exercises (Davidson's Hebrew Grammar). Translations into Hebrew Prose.

Reading and Explanation of easy Prose and Poetical Passages in the Old Testament. During Session 1892-93 the Book of Genesis and selected Psalms will be read.

Oral and Monthly Written Examinations.

In connection with this Class there is a *Tutorial Class*, conducted by the Class-Assistant, which meets at an hour found most convenient for the Students, on three days weekly during the Session, and which members of the Ordinary Class may attend without additional fee.

There is also a Preparatory Class in Elementary Hebrew, which meets during the SUMMER *Session, and for which the fee is £*1, 11*s.* 6*d.*

Senior Class—2 *to* 3.

Grammar (Davidson or Gesenius). Müller's Hebrew Syntax. Hebrew Prose Composition.

Reading and Explanation of portions of the Historical, Poetical, and Prophetic Books of the Old Testament. During Session

1893-94 Psalms, Book IV., and the Books of I. and II. Samuel and Zechariah, will be read critically.

Discussion of *Critical and Historical* Questions connected with the Books read.

Oral and Monthly Written Examinations.

The Senior Hebrew Class will be the Graduating Class in Hebrew for the Ordinary Degree of Master of Arts ; and any student who desires to attend this Class with a view to Graduation in Arts must previously pass an examination, in accordance with Sect IV. subs. 3 of the Ordinance.

The examination will include plain passages for translation from and into Hebrew, and grammatical questions.

Those who propose, in a subsequent session, to take up Hebrew as one of their Graduation Subjects will have an opportunity of attending the Junior Class in that language during the Session 1892-93.

B.—ARABIC—3 *to* 4.

The work of this Class, which will meet on Mondays, Wednesdays, and Fridays, will consist of Readings in Arnold's Arabic Chrestomathy, and Noeldeke's Carmina Arabici, and of Instruction in Arabic Composition.

In connection with this Class a Tutorial Class will be held by the Class Assistant, which will meet twice a week (Tuesdays and Thursdays) for elementary instruction in Grammar from Socin's Arabic Grammar ; Readings in the language from Arnold's Chrestomathia Arabica ; Instruction in Composition. There is also a Preparatory Class in Elementary Arabic, which meets during the Summer Session, conducted by the Class Assistant under the superintendence of the Professor. The fee is £2, 2s.

C—SYRIAC—3 *to* 4.

It is intended that this shall be a Junior Class, to meet twice a week (Tuesdays and Thursdays) for instruction in Syriac Grammar, Reading, and Composition.

Text-Books.—Nestle's Syriac Grammar ; Syriac New Testament, with Gutbir's Lexicon (Bagster & Sons).

VI. CELTIC.

PROFESSOR MACKINNON.

CELTIC CLASS :—[The class meets daily, at 4 P.M.]

1. Monday, Lecture on Celtic Literature and Philology. In Session 1893-94 the subject of lecture will be :—The Modern Period of Gaelic Literature.
2. Tuesday, Wednesday, and Thursday, Reading and Exposition, mainly of old Gaelic Authors. Translation from English into Modern and Old Gaelic.

   Text-Books.—Extracts for Reading, Part II. ; Windisch's Irische Texte mit Wörterbuch ; Stewart's, O'Donovan's, and Windisch's Grammars.

3. Friday, Reading of Manuscripts.

Any student who desires to attend this Class with a view to Graduation in Arts must previously pass an examination in accordance with Sect. IV. subs. 3. of the Ordinance.

The examination will be in Scottish Gaelic, or Irish Gaelic, or Welsh ; and will include translations from and into English, with grammatical, literary, and easy philological questions.

The fee in the case of a Student who attends with a view to graduation is £3, 3s.

An Advanced Class will meet during the Winter Session of 1893-94, on Monday and Friday, at 3 P.M. The Class will read and Transcribe Old Gaelic Texts.

Fee, £1, 1s.

A Gaelic class for the use of Junior students will meet during the Winter Session 1893-94, Tuesday, Wednesday, and Thursday, at 3 P.M. The class will read Modern Scottish and Irish Gaelic, and commence the study of Old Gaelic.

Text-Books.—Extracts for Reading, Parts I. and II. ; Stewart's and Joyce's Grammar ; Windisch's Grammar.

Fee for this class, £1, 1s.

II.—*Department of Mental Philosophy.*

I. LOGIC AND METAPHYSICS.

PROFESSOR SETH.

Logic and Psychology—Junior Class—1 to 2.

The course in this class falls into three parts :—

(1) An outline of the main facts of Empirical Psychology, dealing more particularly with the facts and processes of cognition ; (2) The Elements of Logic, Deductive and Inductive ; (3) An introduction to the questions of philosophy, with special reference to the history of modern philosophy in England.

1. The Psychological Division of the course includes :—

The place of Psychology as a science, its scope and methods. The physiological mechanism and the relations of mind and organism : the senses, stimulus and sensation.

Analysis and classification of mental states. General conditions of consciousness. Attention : its nature, laws, and effects.

Perception : analysis of the elements involved. The perception of space and of objects in space ; the Berkeleian theory of vision.

Memory and Imagination. Distinction between percepts and images ; illusions, hallucinations, the phenomena of sleep and dreams. Memory as retention. Memory as recognition. Theories of memory. Association and its laws. The productive imagination.

Intellect. Distinction between images and concepts. Nominalism and Conceptualism. The formation of the concept ; thought and language.

The psychology of the Feelings and the Will in outline.

No text-book is prescribed for this part of the course, but frequent reference will be made to the leading works on the subject, and a manual such as Sully's " Outlines of Psychology," Clark Murray's "Handbook of Psychology," Höffding's "Outlines of Psychology," or Dewey's "Psychology," may be usefully read in connection with the class lectures.

2. In the Logical division of the course Jevons's "Elementary Lessons in Logic" will be used to supplement the lectures, and references will be made to Keynes's "Formal Logic" and Mill's "Logic." The subjects treated will include :—

Definitions and Scope of Logic. The Laws of Thought.

Deductive Logic: Notions, Judgments, and Inferences. Exercises in Immediate Inference and in Syllogism. Definition and Division. Fallacies.

Theories of the Judgment and of the ultimate nature of Reasoning.

The relation of Deduction and Induction. The foundations of inductive reasoning: the uniformity of nature and universal causation. Observation and Experiment. The inductive methods. The function of hypothesis. Analogy. Probability.

3. The lectures under this head will deal with :—

The transition from mediæval to modern times and the beginnings of modern thought; Bacon as the spokesman of the new age and the pioneer of scientific method; Descartes as the founder of modern philosophy; the problem of Knowledge in Locke, Berkeley, and Hume.

Professor Fraser's "Selections from Berkeley" and certain chapters of Locke's "Essay" will be used in connection with the lectures as an introduction to the study of modern philosophy.

Metaphysics—Honours Class—3 to 4.

This Class is intended for those who have already attended the ordinary course, or who have otherwise some acquaintance with philosophy. The lectures deal in a more advanced way with the chief systems of modern philosophy, special attention being devoted to Spinoza and Kant.

Supplementary Lectures on Greek Philosophy are also delivered as a part of this Course by Mr Hardie, Assistant to the Professor and Lecturer in Logic and Metaphysics.

The Class constitutes an Honours Course of fifty Lectures, meeting on Monday and Thursday throughout the Session and during a part of the Session also on Tuesday.

The "Bruce of Grangehill and Falkland Prize" is offered annually for competition. (*See* UNIVERSITY PRIZES.)

Summer Session, 1893.

R. P. HARDIE, M.A., *Lecturer.*

HONOURS COURSE IN ANCIENT PHILOSOPHY.

This Class, which will constitute a half-course, qualifying for Honours in Mental Philosophy and in Classics, will meet at eleven o'clock on Mondays, Wednesdays, and Fridays, beginning on May 3.

Subject :—Pre-Socratic Philosophy, and the Philosophy of Plato in its logical and metaphysical aspects.

Books recommended for reference. — Ritter and Preller's Historia Philosophiae Graecae, sections 1-173 in the seventh edition, in connection with Burnet's Early Greek Philosophy : the Republic, Theætetus, and Sophist of Plato.

II. MORAL PHILOSOPHY.

PROFESSOR CALDERWOOD.

Ordinary Class.

The following are the subjects embraced in the Course of Moral Philosophy :—

INTRODUCTION.—Province and Aim of Moral Philosophy.

1. PSYCHOLOGY OF ETHICS.—Knowledge of Moral Distinctions ; form and source of this knowledge ; Rival Theories — (*a.*) Intuitional Theory ; (*b.*) Evolution Theories, — Biologic (Spencer), Utilitarian (Mill) ; Dialectic (Hegel). Impulses to Action ; Restraints upon Action. The Will—its Nature and

Functions. Libertarian and Deterministic Theories. Moral Sentiments; their Nature and Influence. Disorder of Moral Nature.

2. METAPHYSIC OF ETHICS.—The Being of God; His Attributes; His Moral Government. The Foundation of Virtue; the Relation of Divine Sovereignty to Free-Will; the Relation of Human Desire to Divine Sovereignty; the Origin of Evil; the Immortality of the Soul.

3. APPLIED ETHICS.—Man's Position in the World; Guidance of the Individual; Formation of Moral Character; Sociology; Natural Religion.

4. THE HISTORY OF MORAL PHILOSOPHY.—The Rise of Philosophy; Distinction of Moral from Intellectual Philosophy; Development of Systems of Moral Philosophy in Ancient and Modern Times.

The Course includes lectures, oral and written examinations and essays.

Text-Books.—The Professor's "Handbook of Moral Philosophy;" Kant's "Groundwork of the Metaphysic of Ethics;" Schwegler's "History of Philosophy."

Books recommended for reference.—Price's "Principal Questions in Morals," Butler's "Sermons on Human Nature," Reid's "Active Powers," Mill's "Utilitarianism," Herbert Spencer's "Data of Ethics," Wallace's "Logic of Hegel," Hegel's "Philosophy of the State," Green's "Prolegomena of Ethics," Sidgwick's "Methods of Ethics," Fleming's "Vocabulary of Philosophy," Ueberweg's "History of Philosophy."

Honours Class.

The History of Moral Philosophy from the time of Socrates.

Subjects of study.—The Sophists, The Teaching of Socrates as presented in Xenophon's "Memorabilia," and in Plato's "Protagoras" and "Apologia." The Ideal Philosophy of Plato as developed in the "Republic," and in other Dialogues. Aristotle's "Nicom. Ethics." The rise of Modern Philosophy; the "Method and Meditations" of Des Cartes; Spinoza's "Ethics." The Scepticism of Hume, and the fresh start of Philosophy subsequently. The Scottish Philosophy; Kant's Ethical System; Fichte's Practical Philosophy; Hegel's Ethics; Schopenhauer's Pessimism, in its Ethical Aspects; Later developments of the Ethics of Evolution.

Books recommended.—Zeller's "Socrates and the Socratic Schools," Plato's "Republic," Jowett's Translation, Sir Alexander Grant's "Ethics of Aristotle," Zeller's "Stoics, Epicureans, and Sceptics"; Kant's "Ethics," Semple's or Abbott's "Kant's Theory of Ethics," Hegel's Ethics in Morris's "Hegel's Philosophy of the State and of History," Grigg's Philosophical Classics; Green's "Prolegomena to Ethics"; Utilitarianism, as presented in Mill's "Utilitarianism;" in Spencer's "Data of Ethics" and "Justice;" and in Sidgwick's "Methods of Ethics.

Summer Session, 1893

C. M. DOUGLAS, M.A., D.SC., *Lecturer.*

HONOURS COURSE IN PSYCHOLOGY.

This Class, which will constitute a half-course qualifying for Honours in Mental Philosophy, will meet at twelve o'clock on Mondays, Wednesdays, and Fridays, beginning on 3rd May.

Attention will mainly be directed to leading principles and problems; results of experimental research will be specially kept in view.

No text-book will be followed, but frequent references will be given to James' "Principles of Psychology," Baldwin's "Hand-book of Psychology," Sully's "Human Mind," and other books.

III. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

PROFESSOR NICHOLSON.

The course, extending to 100 meetings of the Class, qualifies for Graduation in Arts.

The Lectures will follow the order of arrangement of John Stuart Mill's *Principles of Political Economy.*

1. METHODS USED IN ECONOMIC SCIENCE.—Analysis of Fundamental Conceptions, Wealth, Capital, &c.

2. PRODUCTION OF WEALTH.—Division of Labour—Accumulation of Capital—Growth of Population.

3. DISTRIBUTION OF WEALTH.—Socialism —Land Tenure—Wages—Profits—Rent—Trade Unions.

4. VALUE.—Money—Inflations and Depressions of Trade—Commercial Crises—Banking—Free Trade—Foreign Exchanges —-Stock Exchange.

5. ECONOMIC PROGRESS.—Effects of Progress on Value, and on the relative Distribution of Wealth.

6. PRINCIPLES OF THE LIMITS OF GOVERNMENT INTERFERENCE WITH INDUSTRY.—Direct and Indirect Taxation—Incidence of Taxes—National Debts—Contracts—Joint Stock Companies—Patents—Copyrights.

Although Mill will be used as text-book, references will be constantly given to previous writers. *e.g.*, Adam Smith and Ricardo, as well as to more recent writers. *e.g.*, Sidgwick, Walker, Jevons, Marshall, Bagehot, &c.

History.—One lecture a-week will be devoted to the Economic History of England. This course is not intended to give the history of the Theory of Political Economy, but to trace the principal facts and institutions in the material and social life of the English people from an economic standpoint, *e.g.*, Gilds, Feudal System, Land Tenures, Ecclesiastical Influence, Serfdom and the Poor, Forms and Amount of Wealth, Foreign and Internal Trade, &c.

IV. THEORY, ART, AND HISTORY OF EDUCATION.

PROFESSOR S. S. LAURIE.

A.—THEORY, OR SCIENCE, OF EDUCATION.

Introductory.

The Possibilities and the End of Education. The relation of the School to this End. The Educative Process generally.

Materials of Instruction conducive to the attainment of the End, and the carrying out of the Process. Relative value of subjects. Distinction of Real and Formal, Humanistic and Naturalistic.

Material conditions of the life and growth of Mind, i.e., *Physiology and its Educational Lessons.*

B.—SCIENCE OF EDUCATION, *i.e.*,

Applied Psychology and Ethics.—I. The Psychology of Intelligence in its educational relations fully treated. Periods of Mental Growth. Methodology or the Principles and Rules of the Art which the Science yields.

II. Psychology of the Ethical Nature of Man in its educational relations. The Real of Morality (Instruction and Training); the Formal in Morality (Discipline).

C.—ART OF EDUCATION.

I. *Intellectual.*

Rules of the Art, i.e., *Method in Intellectual Instruction, Training, and Discipline.*—Analytic exposition of the Rules, showing their derivation from the Science as above. Application of the Rules to teaching of—

(1.) Real-Naturalistic subjects, *e.g.* Object-lessons, Elementary Science, Geography, &c.
(2.) Real-Humanistic subjects, *e.g.* Language, Literature, Economics, History, &c.
(3.) Formal subjects, *e.g.* Arithmetic, Geometry, Grammar.

II. *Ethical.*

Rules of the Art, i.e., *Method, in Moral Training and Dis-*

cipline. Motives—The Authority of the Teacher: the nature and conditions of its exercise. Punishments, Rewards, &c., &c.

The Organisation of a School. Organisation of a State-system. The ideas governing Primary, Secondary, and University Instruction respectively. The Manual and the Technical in Instruction. School appliances. The Manipulation of a Class. The Teacher.

D.—History of Education and of Theories.

Pre-Christian Education — 1. Education in Ancient Egypt. 2. The Education of the Ancient Persians. 3. Education of the Hindu Races. 4. Education among the Semitic Races. 5. Education among the Hellenic Races. The educational views of Plato and Aristotle. 6. Education among the Romans. 7. Detailed analysis and exposition of the Institutions of Quintilian. 8. Plutarch.

Christian Education—1. The decay of the Romano-Hellenic, and the rise of Christian, Education. 2. The Cathedral and Monastery Schools. 3. The Rise of Universities.

The Renaissance—1. Humanism as represented by Erasmus, Colet, Luther, Melancthon, John Sturm, and Roger Ascham. Exposition of "The Scholemaster." Rabelais and Montaigne.

The Modern Movement — 1. Lord Bacon. 2. Ratichius. 3. Comenius. 4. Milton's Educational views. 5. Analysis and exposition of John Locke's "Thoughts on Education," and the "Conduct of the Human Understanding." 6. Rousseau, Basedow, and Campe. 7. Pestalozzi, Jacotot, Fröbel, Jean Paul Richter, Diesterweg, Dr Arnold. 8. Dr Andrew Bell and Joseph Lancaster. 9. Herbert Spencer and contemporary Realism.

A short course of Lectures will be given on Education in China if time permit.

Note.—The books to be thoroughly studied during the Session, apart from the Lectures, are *Comenius Didactic*, and the Professor's book on "Language and Linguistic

Method." The "Institutes of Education" should also be in the hands of the student. *Four written Examinations will be held during the Session, and Three Essays on educational principles or method called for.*

PRACTICE IN TEACHING.—Arrangements are made at the Training Colleges for securing training in the *Practice of Teaching* to the extent of the requirements of Government and of the University Schoolmaster's Diploma. Fee for this, £1, 10s. 6d. Facilities are also given for visiting one or two of the principal schools, and acquiring a knowledge of their organization.

V. PHILOSOPHY OF LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

A course of forty lectures on the Philosophy of Law will be delivered from the Chair of Public Law, commencing on Monday, 23rd October 1893, at three o'clock, which will qualify as a half-course for graduation. The Class will meet five days a week. The course will be divided into two parts :—

(1.) The Science of Natural Law.

Relations of the Science of Natural Law to Ethics explained. Historical sketch of the Science, and of the conception of Justice. (*a*) The Ancient Period. (*b*) Christianity and the Middle Ages. (*c*) The Modern Period. Examination of the Ethical aspects of the State, and the institutions of society. Marriage, the Family, Property, Punishment, &c.

Books of reference. — Lorimer, Institutes of Law ; Ahrens, Cour de Droit Naturel; Lerminier, Philosophie de Droit; Bluntschli, The Theory of that State.

(2.) The Science of Positive Law.

The Province of Jurisprudence determined. Examination of the Sources of Positive Law. Classification of Rights.

Books of reference.—The Student's Austin ; Holland, Jurisprudence. Sir Henry Maine's Works.

III.—*Department of Science.*

I. MATHEMATICS.

PROFESSOR CHRYSTAL.

First Class—This Class is taught by the Assistant, under the supervision of the Professor. 12 to 1.

Plane Geometry equivalent to Euclid, Books i., ii., iii., iv., and vi. (*Syllabus of Plane Geometry*, prepared by the Association for the Improvement of Geometrical Teaching forms the text of the lectures); Solid Geometry, equivalent to Euclid, Book xi.; Modern Geometry; and Elementary Algebra.

Second Class—10 to 11.

This class is the qualifying class for the Ordinary Degree of M.A. and for the First Science Examination.

Algebra, including the elements of the Theory of Equations, and of Determinants, the Theory of Limits and the Elements of Curve Tracing; Plane Trigonometry; Conic Sections, treated geometrically and analytically; Modern Geometry.

Intermediate Honours Class—Monday, Wednesday, Friday, 11 to 12.

The work of this course will be suitable for Engineers and other Science Students who do not wish to make a specialty of Pure Mathematics.

The elementary parts of the Differential and Integral Calculus, and of the Calculus of Finite Differences. Analytical Geometry, Plane, and Elementary Solid. It is assumed that the Student has acquired a knowledge of the Theory of Equations, and of the elements of the Theory of Determinants before he joins this Class.

Advanced Honours Class—Monday, Wednesday, Friday, 9 to 10.

The subjects of the Advanced Course are the higher parts of the Differential and Integral Calculus; Differential Equations; Definite Integrals with special reference to Fourier's Theorem;

Functions of Laplace and Bessel; Higher Plane Curves; Analytical Geometry of Three Dimensions.

Additional lectures on Quaternions, Projective Geometry, and other special subjects are given occasionally.

Tutorial Classes.—In addition to the ordinary class lectures occasional lectures are given by the Class Assistant. The time is devoted to the repetition of parts of the class lectures and to the working of examples.

Home Exercises are prescribed weekly in all the classes.

Written Examinations on the class lectures are held during the Session. The class honours are determined solely by these examinations.

Text-Books.—As a rule *special* text-books are not prescribed; but the student is recommended to select from the following list:—

Geometry.—Wilson's Elementary Geometry, or the Text-Books of the Society for the Improvement of Geometrical Teaching, and one or more of the following, for the sake of the exercises they contain:—Mackay's, Todhunter's, Nixon's, or Casey's edition of Euclid's Elements, and Casey's Sequel to Euclid.*[1]

Algebra.—Chrystal, or Todhunter, Gross, Chambers's Mathematical Tables.

Solid Geometry and Conic Sections.—Taylor (smaller work) or Taylor* (larger work).

Trigonometry.—Walmsley, Todhunter, or Lock (M'Lelland and Preston* for Spherical Trigonometry).

Analytical Geometry.—Smith's Analytical Conic Sections; and Dyer's Exercises in Analytical Geometry. Students intending to take the Third Class are recommended to get Salmon's Conic Sections, Salmon's Higher Plane Curves,* and Salmon's Geometry of Three Dimensions,* or, instead of the last, Smith's Solid Geometry.

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[1] Works marked with asterisks are recommended to those only who make Mathematics a specialty.

Projective Geometry.—Cremona's Elements of Projective Geometry translated by Leudesdorf, or Henrici's Article on Geometry, Encyclopædia Britannica (9th edition).

Higher Algebra and Theory of Equations, etc.—Burnside and Panton's, or Todhunter's Theory of Equations; Thomson's Introduction to Determinants, and Muir* or Scott*; and Salmon's Higher Algebra for those who mean to read for Mathematical Honours.

Differential and Integral Calculus.—Williamson's Treatises; Forsyth's Differential Equations*; Frost's Curve Tracing; Boole's Finite Differences.*

SUMMER SESSION.

CHARLES TWEEDIE, M.A., B.SC., *Lecturer.*

The Lectures of the Senior Class will, so far as expedient, cover the same work as in corresponding Winter Course, and will embrace Algebra, Plane Trigonometry, and the elements of Conic Sections.

This Class has the double function of preparing for the M.A. Pass Examination, and of partially qualifying as a Graduation Course.

II. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

ORDINARY CLASS.

(Qualifying for Ordinary M.A. and for First Science Examination).

The subjects embraced in the Course of Natural Philosophy are the following:—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

2. Abstract Dynamics—including Kinematics, Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with their applications.

3. Sound, and Wave-propagation in general.

4. Heat, with its application to the Steam-Engine, &c.

5. Light (Geometrical and Physical Optics).

6. Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics, and Magnetism, with their practical applications to the Telegraph, &c.

7. Conservation of Energy.

8. Plane and Physical Astronomy.

9. Meteorology.

Properties of Matter, Abstract Dynamics, and Conservation of Energy, together with two or three others of the above divisions of the subject, are treated in detail every Session, the remainder being necessarily discussed in a more superficial manner, as it is impossible to enter at length into all in the course of a single Session.

It is intended that in Session 1893-94, in addition to Sections 1, 2, and 7, Sections 4 and 6 shall form the more detailed part of the Course.

The whole Class is examined at short intervals during the Session upon the subjects already treated in the Lectures; and a prize is given for the best answering. In these examinations no Mathematics are requisite, except the most elementary portions of Arithmetic, Algebra, and Geometry.

In the months of January and March there are special Examinations upon prescribed subjects; and, on these two occasions only, the Class is divided into two parts—the division depending mainly upon the students' proficiency in Mathematics. In the Lower Division, the elements of Algebra and Geometry alone are required; in the Higher Division, Algebra, Geometry, and the Geometry of the Conic Sections are necessary.

The Prizes in each division of the Class are determined by adding the marks obtained in the two sets of Examinations above described. No Student who has obtained a Prize in either Division of the Class can be allowed to compete, in a subsequent Session, for a Prize in the same or in a lower Division.

The Text-Book for the Dynamical part of the Course will be

Thomson and Tait's "Elements of Natural Philosophy" (Pitt Press, Cambridge). Of this, however, only the more elementary portions will be required for the Lower Division. For the remainder of the subject the student may consult some of the following books : — Clerk-Maxwell's "Matter and Motion," Jenkin's "Electricity," Balfour Stewart's "Lessons in Physics," Tait's "Properties of Matter," "Heat," and "Light."

The special Examinations in January 1894 will be on the following subjects :

Higher Division.

Newton's "Three Sections" (Goodwin's "Course of Mathematics," Frost's "Newton," or any good edition of the *Principia*).

Lower Division.

Herschel's "Astronomy," in Lardner's Cyclopædia, omitting the chapter on Perturbations. A series of explanatory lectures will be given by the Class-Assistant before this Examination.

The subjects for the March Examinations in both Divisions will be Kinematics and Dynamics. The range will depend upon the progress which the Class has made in these subjects.

Subject of Voluntary Essay to be given in before the last week of the Session :—"Dissipation of Energy in ordinary terrestrial Phenomena."

HONOURS CLASSES.

(For the benefit of Engineering and Science Students, and of Arts Students wishing to Graduate with Honours in the Department of Mathematics.)

For the Programme of the Advanced Science Class, see Courses in Science.

The Intermediate Course of at least Fifty Lectures will be given by the Lecturer on Applied Mathematics. It will take the place of what has hitherto been called the Advanced Class, but it will be more elementary.

The hour of meeting, and other arrangements for the Advanced Course, cannot be fixed until it is known what number of students will present themselves, and what time they have at their disposal. The subjects commenced in the Intermediate Course will here be further developed, and some one or more special branches of Applied Mathematics [such as the Kinetic Theory of Gases, the Lunar Theory, the Undulatory Theory, Vortex Motion, &c.] will be fully treated.

One of the text-books in each of these Courses is the article *Mechanics*, in the last edition of the *Encyc. Brit.*

SUMMER CLASS OF PHYSICS, SPECIALLY FOR MEDICAL STUDENTS.

For particulars, see Courses in Faculty of Medicine.

PHYSICAL LABORATORY.

This has been established with the view of affording Students a practical knowledge of the construction of, and manner of using physical apparatus, and with the mode of conducting experimental inquiries. The Laboratory is open for five or six hours daily during the Winter and Summer Sessions, under the personal superintendence of the Professor and his Class-Assistant. Fee, £6, 6s. for the Winter Session. It is hoped that, with the valuable collection of apparatus in the Museum, results of real use to science may be obtained.

A practical class, for the instruction of beginners in the elementary processes of measuring Time, Mass, Length, Angle, Force, &c., will be formed in the Winter and also in the Summer Sessions. The course, in each case, will extend over about three months. The fee is £2, 2s. The Professor reserves to himself the right of admitting *free*, to general Laboratory work, such matriculated students of the practical class as may show special diligence and aptitude.

III. PRACTICAL ASTRONOMY.

PROFESSOR COPELAND.

(*Eighty Lectures and Twenty Meetings of two hours each for Observatory work, which must not be on the same days as the Lectures.*)

Lectures on Practical Astronomy, preceded by an introductory address, will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays. Instruction in the use of portable and fixed astronomical instruments will be given at the Royal Observatory on Calton Hill, on Fridays, beginning at 8 P.M. Attendance at the evening demonstrations is obligatory on all who take Astronomy as a qualifying course for graduation. The Lectures will be divided into two courses, the first of which will embrace the theory and use of Astronomical Instruments, together with as much General Astronomy as is requisite to guide the Student in making observations in the field as well as in an observatory. The Second Course will treat of the utilization of observations of Comets, etc. in the computation of orbits and ephemerides.

In the event of a considerable increase in the number of Students, it may be necessary to divide the class into two groups for the practical work at the Royal Observatory, where the space is very limited.

IV. CHEMISTRY.

PROFESSOR CRUM BROWN.

This Course is the same as that provided for Students of Medicine and Science. It embraces One Hundred Lectures and Fifty Meetings for Practical Work in the Laboratory.

V. ZOOLOGY.

PROFESSOR EWART.

The Course is the same as that provided for Students of Medicine and of Science. It embraces Fifty Lectures and Fifty hours for Practical work, the whole Course extending over seventy-five separate days.

VI. BOTANY.

PROFESSOR BAYLEY BALFOUR.

The Course is the same as that for Students of Medicine and of Science. It embraces Fifty Lectures and Fifty hours for Practical work, the whole Course extending over seventy-five separate days.

VII. GEOLOGY, including MINERALOGY.

PROFESSOR JAMES GEIKIE.

For Synopsis of this Course, see under Science.

IV.—*Department of History and Law.*

I. HISTORY.

PROFESSOR KIRKPATRICK.

This Class meets daily, except Saturdays, at two o'clock.

The Course, extending to a hundred meetings of the Class, qualifies for Graduation in Arts.

The subject to be treated of, until further notice, is the HISTORY OF THE BRITISH EMPIRE, divided into the following Periods or Chapters, of which a fuller Syllabus may be obtained on application to the Professor or to the Clerks of Senatus :—

Introductory.—1. Ancient Period (to A.D. 449).—2. Colonisation and Conflict (449-839).—3. Anglo-Saxons and Danes 839-1066).—4. Normans (1066-1154).—5. Organisation (Plantagenet : 1154-99).—6. The Great Charter (Plantagenet : 1199-1272).—7. Institution of Parliament (Plantagenet : 1272-1327).—8. War, Plague, Revolution (Plantagenet : 1327-99).—9. Constitutional Rule and Military Prestige (Lancastrian : 1399-1422).—10. Wars of the Roses (Lancastrian and Yorkist : 1422-85).—11. Restoration of Order, Extortion (Tudor : 1485-1509).—12. Despotism, Reformation, Spoliation (Tudor : 1509-47).—13. Reformation and Reaction (Tudor : 1547-58).—14. Church and State triumphant over Romanists and Puritans (Tudor : 1558-1603).—15. Royal Aggression, Puritan Revolution, Colonisation (Stuart : 1603-49).—16. Commonwealth and Protectorate (1649-60).—17. Restoration and Revolution (Stuart : 1660-89).—18. The New Settlement, Union with Scotland, &c. (1689-1714).—19. Rise of Cabinet Government (Hanoverian : 1714-60).—20. The "King's Friends" (Hanoverian : 1760-84).—21. Constitutional Government, French War, British Success, Union with Ireland, Reaction (1784-1820).—22. Reforms, Civil and Religious (1820-37).—23. Free Trade, Education, Progress (1837-92).

WORK OF THE CLASS.—1. Lecture daily, except Saturdays, chiefly on the political, social, religious, and literary evolution of England, with parallel references to Scotland and Ireland, America, India, &c. The hour on Fridays will be devoted to examination of original sources (in Latin, Anglo-Saxon, Middle English, Early French, &c.), specimens of which will be printed for the use of the Class.

2. The Professor's Class Library (adjoining the Lecture Room, and superintended by a Class Assistant) may be consulted by members of the Class (both ladies and gentlemen) on Mondays, Tuesdays, Thursdays, and Fridays from 10.30 to 1.30.

3. Four Class Examinations will be held, and two Essays set, during the Winter Session. Separate prize and honours lists will be issued for distinction in the examinations and in the essays respectively.

4. Tutorial instruction will be given from time to time by the Professor's Class Assistant.

BOOKS RECOMMENDED.—For elementary purposes, S. R. Gardiner's "Student's History of England," or J. R. Green's "Short History of the English People," or J. F. Bright's "History of England." For wider study see the lists given by Mr Gardiner, and also the catalogue of the Professor's Class Library.

II. FINE ART.

PROFESSOR BALDWIN BROWN.

This Course will extend to One Hundred meetings of the Class, and will qualify as an alternative Course for the M.A. degree.

The Lectures are designed :—

1. To bring before students, by means of critical descriptions and illustrations, the chief ancient and modern works of Architecture, Sculpture, Painting, and the Decorative or Industrial Arts.

2. To show how these works are connected in their origin and use with the national and social life of successive epochs ; and conversely, how the study of Artistic Monuments illustrates Classical and Biblical literature, and bears on historical investigation in general.

3. To explain as far as practicable the technicalities of the various Arts, and to open up those aspects of Art which present themselves naturally to the artist, but are sometimes overlooked by the literary student.

The course practically divides itself into two, about half the meetings being devoted to the more purely historical, half to the artistic and technical aspects of the subject.

On the historical side :—

> The characteristics of different styles and schools of Art will be broadly indicated, but this part of the subject, which can be studied from books, will not be dwelt upon at length. In each Session, however, special attention will be paid to some one important period. The period selected for study in Session 1893-94 is Christian Architecture and Decoration, especially in Britain, during the Romanesque and Gothic epochs.

On the artistic side :—

> Particular stress is laid on the explanation of different materials and technical processes, as upon these largely depend the particular forms in which beauty is realised in the various works of human hands.

The following are the arrangements for the work of the Class :—

There are Lectures daily at 2 P.M., but the meeting on Friday is of a less formal kind, and affords opportunity for the discussion of special points of interest or difficulty.

Class examinations are held, and a series of eight Essays are set for the Cousin Prize (£15).

The Class Library and Reading-Room will be open to members of the Class, according to arrangements to be afterwards adjusted.

Visits to Museums, &c., take place from time to time on Saturdays.

In connection with the Class Library, students have access to collections of examples in the form of casts, photographs, &c.

The Professor's manual, "The Fine Arts," is used, so far as it goes, as a text-book.

CLASSICAL ARCHÆOLOGY (in connection with Classical Honours).

PROFESSOR BALDWIN BROWN.

Teaching in this subject will be provided in the Winter Session 1894-5.

Professor Baldwin Brown will deliver a course of Fifty Lectures, supplemented by such additional Class Meetings as may be found desirable.

The treatment of the subject will embrace:—

1. A general survey of the field of study.
2. An examination of selected passages from ancient authors, bearing on the History of Classical Art.
3. A special study of some one branch of the subject, such as the History of Greek Vase Painting, or the Types of Greek Coins.

The text-books will be:—Overbeck's "Schriftquellen" and Murray's "Handbook of Greek Archæology."

The Professor will be glad to meet any Student who wishes to take the subject, with a view of advising him as to his preliminary study.

III. CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK.

This Class meets daily in the Summer Session, except Saturdays, at five o'clock.

The Course, extending to about forty-five meetings of the Class, qualifies as a half-course for Graduation in Arts.

The Professor's Class Library, superintended by his Assistant, is open to Members of the Class (both ladies and gentlemen), on Mondays and Thursdays from 10.30 to 1.30.

For details, see under Faculty of Law.

IV. ROMAN LAW.

PROFESSOR GOUDY.

The Course of Lectures qualifying for Graduation in Arts to be delivered by the Professor of Roman Law next Winter Session will extend to eighty-eight meetings of the Class.

The Course will be divided into two distinct parts. The first half of the Course (extending to not less than forty-four meetings of the Class) will be devoted to the History of the Laws of Rome, and in particular—

1. *The External History*—shewing the growth of the Constitution and the development of the law from the earliest period till the close of the Republic, the matured system in the early empire, and the ultimate decline under the later Emperors ; and
2. *The Internal History*—embracing the sources of the laws and their general effects in relation to the family (such as slavery, marriage, adoption, emancipation, etc.), to property, to succession, to matters of contract and delict, and to actions. This half of the Course will terminate at the commencement of the Christmas Vacation, and it qualifies as a half-course for Graduation in Arts.

The second half of the Course will be devoted to a doctrinal exposition, in detail, of the laws relating to persons and the family, and to property and real rights.

The fee for the half course is £2, 2s., and for the full course, £3, 3s.

Text-Books.—The Institutes of Gaius and the Institutes of Justinian.

For preliminary reading students are recommended to consult " Outlines of the Science of Jurisprudence," translated from the Juristic Encylopædias of Puchta, &c., by W. Hastie ; and either Muirhead's " Historical Introduction to the Private Law of Rome " or Ortolan's " Histoire de la Législation Romaine " (of which there is an English translation). The Professor also recommends as specially useful for the first half of the Course, Mommsen's " History of Rome " (of which there is an English translation), and " Ancient Law " by Sir Henry Maine.

V. PUBLIC INTERNATIONAL LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

A course of Forty Lectures on Public International Law will be delivered from the Chair of Public Law, commencing on 9th January 1894 at Three o'clock.

The Class will meet *four* days a week.

The Course will include—

1. An historical retrospect.

2. Some account of the science and literature of Public International Law.

3. An examination of the sources, and a critical exposition of the leading doctrines, of Public International Law.

Students are recommended to consult Wheaton's History of the Law of Nations, Introduction; Nys's Le Droit de la Guerre et les Précurseurs de Grotius ; Phillimore's International Law, Vol. I. ; Lawrence's Essays on Modern International Law ; Hall's International Law. Vide Law, CALENDAR.

FACULTY OF MUSIC.

PROFESSOR NIECKS.

Lectures, and Theoretical and Practical Instruction will be given in the Winter Session of 1893-94 :—

1. History of music, especially from Bach to Wagner. This Class will meet once a week. Twenty lectures. Fee, one guinea. Thursdays, 3-4.

2. Harmony, melody, and rhythm. Theory and practice. This Class will meet twice a week. Forty lectures. Fee, two guineas. Tuesdays and Fridays, 3-4.

3. Advanced harmony, melody, and rhythm ; and counterpoint. Theory and practice. This Class will meet twice a week. Fee, two guineas. Tuesdays and Fridays, 4-5.

4. Theory of music : notation, measure, rhythm, *tempo*, melody, harmony, counterpoint, ornaments, forms, &c. (History and present practice.) This Class will meet once a week. Fee, one guinea. Mondays, 3-4.

5. Students of music, if not already matriculated, will be admitted to any or all of the above classes on payment of the Five Shillings University Fee (instead of the £1 Matriculation Fee), in addition to the Class Fees.

6. A course of six historical concerts, illustrative of the development of dramatic music, will be given in the course of the session. Fee for the course, half-a-guinea. Those attending any of the Music Classes will have the privilege of free admission to the course.

The University Court, on the recommendation of the Senatus, has approved of the admission of women to the Music Classes.

Graduation in Arts.

A.—REGULATIONS OF THE UNIVERSITY OF EDINBURGH RELATIVE TO THE DEGREE OF MASTER OF ARTS (M.A.), APPLICABLE TO ALL WHO BEGIN THEIR ACADEMICAL COURSE AFTER 1ST OCTOBER 1892. THE DEGREE OF M.A. IS NOW OPEN TO WOMEN.

The Degree admits to the General Council of the University, to professional Study for the Learned Professions, to the Army, &c. Under recent regulations, framed in virtue of the Education Act (1872), *the Degree qualifies for Masterships of Public Schools, subject to an examination in the methods of instruction, and three months' attendance in a Public School for the practice of teaching.*

ORDINANCE No. 11.

GENERAL, No. 6.—[REGULATIONS FOR DEGREES IN ARTS.][1]

At Edinburgh, the 3rd day of February 1892 *years.*

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-section 5, to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto, and in particular (*b*) the course of study and manner of teaching, the length of the academical session or sessions, the manner of examination, the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration; (*d*) the granting of degrees, and the institution of new degrees; (*e*) the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations; and by the said section 14, sub-section 16, to repeal or modify any Ordinance made under the provisions of the Universities (Scotland) Act, 1858.

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[1] Approved by Her Majesty in Council on 28th June 1892, with the exception of the words "or in Mathematics," occurring in Clause IV. (2) which are to be held as deleted.

Therefore the Commissioners under the first-mentioned Act statute and ordain as follows :—

ACADEMICAL YEAR.

I. (1) The Academical year in each University shall commence on the first day of October. The classes shall meet for the winter session (which shall include not less than twenty teaching weeks) on such day thereafter as the Senatus of each University shall determine ; and shall close not later than the tenth day of the following April.

(2) The University Court of each University shall institute a summer session in such of the subjects or branches of subjects qualifying for graduation in Arts as may be determined by the said Court after consultation with the Senatus. Such session shall commence on such day in May as the Senatus of each University shall determine, and shall include ten teaching weeks at least. The classes shall be conducted by the Professors, or by Lecturers appointed under Ordinance, General, No. 10 (Regulations as to Assistants and Lecturers). Provided that the teaching of classes during the summer session shall be optional to any Professor whose commission is dated before the approval of this Ordinance by Her Majesty in Council, unless such option is barred by the terms of his commission or of any existing Ordinance.

II. The Curriculum for the degree of Master of Arts (M.A.) shall extend over not less than three winter sessions, or two winter sessions and three summer sessions.

PRELIMINARY EXAMINATION.

III. (1) Before entering on the Curriculum each student shall pass a Preliminary Examination in the following subjects :—

1. English.
2. Latin or Greek.
3. Mathematics.
4. One of the following :—Latin or Greek (if not already taken), French, German, Italian, Dynamics.

(2) The examination must be passed in the matters and on the standards hereinafter defined ; but there shall be a higher and a lower standard in Latin, Greek, and Mathematics.

Candidates must pass on the higher standard in at least one of these three subjects, and may pass on the lower standard in either or both of the remaining two ; subject always to the conditions relative to attendance contained in Section IV. hereof.

(3) English shall include Grammar and Composition, and the outlines of Geography and British History, and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(4) Latin and Greek shall comprise grammatical questions, translation into English from Latin or Greek authors not previously prescribed,

and translation of plain passages or easy sentences from English into Latin or Greek. The higher standard shall not be lower than that presently adopted in the examination for a Curriculum of three sessions, or for the Higher Grade Leaving Certificate of the Scotch Education Department, and the lower standard shall not be lower than that presently adopted for the Lower Grade Leaving Certificate of the said Department.

(5) French, German, and Italian shall comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors not previously prescribed, and translation from English into French, German, or Italian; and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(6) Mathematics on the lower standard shall comprise—(1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with easy deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

(7) Mathematics on the higher standard shall, in addition, comprise Euclid, Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

(8) Dynamics shall mean the Elementary Statics and Kinetics of Solids, Liquids, and Gases.

(9) A candidate shall be obliged to pass in all the required subjects at one or not more than two examinations; provided that he may repeat his second examination as often as may be necessary, being examined on each occasion in all the subjects in which he failed, or which he did not profess, at his first.

For the purposes of this sub-section, a candidate's first examination shall be held to be the first at which he passes in any of the subjects professed.

IV. (1) Attendance on any class shall not qualify for graduation, unless the whole Preliminary Examination has been passed.

(2) Attendance on a class in any language included in the Preliminary Examination, or in Mathematics,[1] shall not qualify for graduation, unless the candidate, before entering the class, has passed the Preliminary examination in that subject, and on the higher standard where a double standard is provided. He may, for that purpose,

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[1] See Footnote, p. 109.

attend any Preliminary Examination held during the course of his study, taking only the paper set in that subject; provided always that the provisions of the sub-section immediately preceding shall have been satisfied.

(3) Attendance on a class in any language not included in the Preliminary Examination shall not qualify for graduation, unless the candidate has previously passed an examination in that language on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.

V. (1) The Preliminary Examination shall be held at each University twice in each year, under such regulations as the Senatus, with the approval of the University Court, shall from time to time determine, and shall be conducted in writing.

(2) The Joint Board of Examiners to be appointed under the provisions of Ordinance No. 8 (Regulations as to Examinations), shall have power to accept the Higher Grade Leaving Certificate of the Scotch Education Department in any subject as an equivalent for the Preliminary Examination in that subject; and to accept the Lower Grade Leaving Certificate of the said Department as an equivalent for the Preliminary Examination on the lower standard in Latin, Greek, and Mathematics; provided they are satisfied that the standard of the examination, at which the said certificates were granted, is not lower than that required by this Ordinance.

(3) The Joint Board of Examiners shall have power to determine what examinations, if any, other than those for the Leaving Certificates of the Scotch Education Department may be accepted as equivalent to the Preliminary Examination in whole or in part, provided they are satisfied that such other Examinations are in fact equivalent thereto.

ORDINARY DEGREE.

VI. Candidates for the ordinary degree of Master of Arts may follow the curriculum and take their degree in the subjects hitherto recognised for graduation, as provided by the regulations contained in Ordinances Nos. 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, subject always to the preceding provisions of this Ordinance; or they may vary the curriculum for graduation under the regulations contained in the immediately succeeding sections.

VII. (1) Candidates shall attend full courses in at least seven subjects, and shall be examined on these subjects.

(2) Of these subjects four must be (*a*) Latin or Greek; (*b*) English or a Modern Language or History; (*c*) Logic and Metaphysics, or Moral Philosophy; (*d*) Mathematics or Natural Philosophy.

(3) The remaining subjects may be selected by the candidate from the Departments specified in Section IX. of this Ordinance, under the following condition:—That the whole subjects taken shall include either (*a*) both Latin and Greek, or (*b*) both Logic and Moral Philosophy, or

(*c*) any two of the following three subjects,—Mathematics, Natural Philosophy, and Chemistry.

VIII. (1) Each of the subjects must be studied in a full course of not less than one hundred meetings of the class on separate days, except in cases where the Senatus, with the approval of the University Court, shall have sanctioned, as qualifying for graduation, half courses of not less than fifty meetings on separate days ; or where the Senatus, with the approval of the said Court, shall, having regard to the nature of the subject, sanction full courses of less than one hundred or half courses of less than fifty meetings respectively.

(2) Two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) Where a subject is taught in a practical class, as well as in a systematic class, the Senatus, with the approval of the University Court, shall regulate the course of study and determine the relative proportion of lectures and laboratory or practical work.

IX. The Departments of Study for graduation in Arts in each University shall, if adequate instruction is provided, include the following subjects, with such additions or modifications in any University as may hereafter be made by Ordinance of the University Court :—

1. *Language and Literature.*

Latin.
Greek.
English.
French.
German.
Italian.
Sanskrit.
Hebrew.
Arabic or Syriac.
Celtic.

2. *Mental Philosophy.*

Logic and Metaphysics.
Moral Philosophy.
Political Economy.
Education (Theory, History, and Art of).
Philosophy of Law.

3. *Science.*

Mathematics.
Natural Philosophy.
Astronomy.
Chemistry.
Zoology.
Botany.
Geology.

4. *History and Law.*

History.
Archæology and Art (History of).
Constitutional Law and History.
Roman Law.
Public Law.

X. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the ordinary degree of Master of Arts on payment of the fees required.

DEGREE WITH HONOURS.

XI. (1) The degree of Master of Arts may be taken with Honours in any of the following Groups, in which Honours Classes shall have been established in at least two subjects :—

(*a*) Classics (*i.e.*, Latin and Greek, with optional subjects such as Comparative Philology, Ancient Philosophy, and Classical Archæology).
(*b*) Mental Philosophy.
(*c*) Mathematics and Natural Philosophy.
(*d*) Semitic Languages.
(*e*) Indian Languages.
(*f*) English (Language, Literature, and British History).
(*g*) Modern Languages and Literature.
(*h*) History.

(2) Every candidate shall take up at least five subjects. Two of these subjects, under separate Professors or Lecturers, must be selected from the candidate's Honours Group ; and the five subjects shall include one from each of the Departments of Language and Literature, Mental Philosophy, and Science, set forth in Section IX. of this Ordinance.

(3) Every candidate shall attend seven Classes, taking two Classes (one of which shall be an Honours Class) in each of his Honours subjects.

(4) A candidate who has obtained Honours in any one Group may, before graduating, present himself again for examination in a second Honours Group. In such a case, he shall not be required to attend more than two additional Classes, which shall be Honours Classes, in the second Group.

(5) The examination in the subjects comprised in the candidate's Honours Group shall be of a higher standard than that required for the ordinary degree of Master of Arts. In his other subjects the standard shall be that required for the ordinary degree.

(6) The Senatus shall, subject to the provisions of Sections XVI. to XX. of this Ordinance, from time to time determine what subjects shall be comprised in each Group, what subjects may be taken in half courses, and in which Group they may be taken : Provided that no new Group shall be instituted except by Ordinance of the University Court.

(7) The provisions of Section VIII. of this Ordinance shall apply to Candidates for Honours ; but, in their case, not fewer than fifty meetings, on separate days, extending over an entire winter session, shall constitute a full course for an Honours Class ; and not fewer than twenty-five meetings on separate days, extending over half a winter session, or an entire summer session, shall constitute a half course.

XII. (1) Every candidate shall include Latin, or Greek, either in his

Honours Group or as one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

(2) Greek shall be compulsory for candidates for Honours in Mental Philosophy.

(3) Candidates for Honours in English, or Modern Languages and Literature, or History (Groups *f*, *g*, *h* of Section XI. hereof) shall include within the whole subjects taken for their degree (*a*) Logic and Metaphysics or Moral Philosophy, and (*b*) Mathematics or Natural Philosophy.

XIII. (1) The whole examination in the candidate's Honours Group must be taken at one time, and the whole examination necessary for graduation with Honours must be taken within five years from the date of the candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on special cause shown; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the extension.

(2) Candidates for Honours may be examined, at any time during their curriculum, in the three subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

XIV. (1) A candidate who has passed the examinations necessary for the ordinary degree of Master of Arts, but who has not yet graduated, may present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination, and shall not be required to attend further classes :—subject always to the provisions of Section XII. hereof.

(2) No one shall be allowed to present himself a second time as a candidate for the degree of Master of Arts with Honours, who, upon examination, has failed to obtain Honours.

(3) A candidate shall be held to have presented himself who has notified his name for examination in accordance with the University regulations. But it shall be in the power of the Senatus to relax this rule on special cause shown ; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XV. (1) In each Group there shall be three Grades of Honours, to be denominated respectively the First, Second, and Third Class. The names of the candidates entitled to Honours in each class shall be arranged in alphabetical order.

(2) For the degree of Master of Arts with Honours a Diploma shall be given setting forth the subjects in which he has taken Honours.

BOARDS OF STUDIES.

XVI. The Senatus of each University shall from time to time institute Boards of Studies corresponding as nearly as may be to the Departments of Study enumerated in Section IX. of this Ordinance.

XVII. Each Board of Studies shall consist of such Members of the Senatus and Lecturers in the University as the Senatus may from time to time select, and the Senatus shall appoint one of the Members of the Board to be Convener thereof.

XVIII. Before the end of each winter session each Professor and Lecturer in the said Departments of study shall submit to the proper Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class for the next Academical year. As soon as such approval has been given, the syllabus shall be transmitted to the Faculty of Arts for its consideration. The syllabus, with such observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

XIX. (1) Before the end of each winter session each Board of Studies shall prepare a scheme, defining, for the Academical year next but one following, the classes which shall be deemed to be Honours classes, and the subjects and courses of reading for Honours in its Department, and shall report the same to the Faculty of Arts for its consideration. The scheme, with such observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

(2) Each Board shall in like manner make recommendations through the Faculty of Arts to the Senatus in regard to the half courses which may be sanctioned under the provisions of this Ordinance, and the lectures which may be given on special subjects.

XX. The Principal and the Dean of the Faculty of Arts shall be *ex-officio* Members of each Board of Studies. The Convener shall preside, and, in his absence, each meeting shall appoint its own Chairman, and every Chairman shall have a deliberative, and, in cases of equality, a casting vote.

GENERAL.

XXI. In the case of a student whose native language is other than European, the Senatus may, at the Preliminary Examination, accept such language as a substitute for a modern European language. The Senatus may also in such a case accept as an alternative to Latin or Greek any other classical language, such as Sanskrit or Arabic, subject always to the provisions of Section IV. Sub-section 3 hereof.

XXII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class as qualifying for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XXIII. The examination in all the languages in the Curriculum shall, as far as possible, be on the same standard in Examinations for the same degree, and shall in all cases test the candidate's knowledge of the history and literature of the several countries.

XXIV. A candidate for the degree of Master of Arts shall not be deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XXV. A student, who has given attendance at classes recognised as qualifying for graduation during one or more sessions in any one or more of the Scottish Universities, may complete his Curriculum by giving attendance during the remainder of his course in another Scottish University, and may proceed to a degree in the latter University in the same way, in all respects, as if the previous part of his Curriculum had been taken therein : Provided always that every such student shall be bound to produce, to the satisfaction of the Senatus of the latter University, certificates of his having passed the Preliminary Examination, and of his attendance at the former University or Universities, and shall be examined in all the subjects necessary for a degree of Master of Arts by the Examiners of the University in which he completes his Curriculum, and in which alone he shall be allowed to graduate ; and that no such student shall be admitted to a degree in any University unless he has given attendance in such University during the last winter session of his Curriculum, and one other winter session or two summer sessions.

XXVI. A candidate for the degree of Master of Arts with Honours, who has failed to be placed in any class, may, provided that in the opinion of the Examiners he has given evidence of sufficient attainments in any subject for the ordinary degree of Master of Arts, receive from them a certificate of having passed in such subject, which shall count *pro tanto* as part of the examination required under the regulations for the ordinary degree of Master of Arts.

XXVII. The degree of Master of Arts shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

XXVIII. A student who, at the time when this Ordinance shall come into operation, shall have commenced his course of study with a view to graduation in Arts in any of the Scottish Universities under the regulations in force at the time in such University, may complete his course and become a candidate for the degree of Master of Arts, with or without Honours, in conformity with such regulations. And any such student who has passed the examination hitherto required for admission to a Curriculum of three sessions shall, if he desire to come under the regulations of this Ordinance, be exempted from the Preliminary Examination herein required.

XXIX. Students may attend any classes without having passed the

Preliminary Examination within the meaning of this Ordinance, but such attendance shall not qualify for graduation.

XXX. It shall be competent for the University Court in each University to discontinue the Junior Classes, or Middle Classes, where such exist, in Latin, Greek, and Mathematics, when, in the opinion of the Court, the provision for Secondary Education in schools throughout the country is sufficient to render such classes no longer necessary.

XXXI. Ordinances numbered 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, as altered under the provisions of the said Act, are hereby repealed, in so far as they are inconsistent with this Ordinance.

XXXII. This Ordinance shall come into force at the beginning of the first Academical year after the date on which it is approved by Her Majesty in Council.[1]

In witness whereof these presents are sealed with the seal of the Commission.

A. S. KINNEAR,
Chairman.

JOINT BOARD OF EXAMINERS OF THE SCOTTISH UNIVERSITIES.

The following are the members of the Joint Board appointed by the Scottish Universities under Ordinance No. 13 (General No. 8) of the Scottish Universities Commissioners :—

Chairman—Principal Sir William Muir, K.C.S.I., D.C.L., LL.D., &c.

Convener—Professor Taylor, D.D.

Appointed by St Andrews University—Professor Jones, Dr Hugh Campbell, George Lowson, Esq.

Appointed by Glasgow University—Professor Ramsay, Dr George Merry, A. M. Bell, Esq.

Appointed by Aberdeen University—Principal Sir William Geddes, the Rev. Professor Pirie, the Rev. Dr W. L. Davidson.

Appointed by Edinburgh University—Professor Butcher, Charles D. Campbell, Esq., William Harvey, Esq., LL.B.

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[1] See footnote, p. 109.

For later regulations of the Joint Board of Examiners regarding the Preliminary Examinations; and Examinations accepted as equivalents, see after page 288.

PRELIMINARY EXAMINATION.

(*See Time-Table of Examinations, pages* 122 *and* 123, *and Examination Papers in* 1892-93, *pages* 163 *to* 199 *inclusively*).

The Joint Board issue from time to time to the Examiners of each University such general directions as to the character of the Preliminary Examination papers to be set, as may best secure an adequate and uniform standard.

Before entering on the curriculum for the Degree of Master of Arts each Candidate is required to pass a Preliminary Examination in :—

(1.) English (higher standard), including British History and General Geography.

(2.) Latin *or* Greek. } *One of these subjects must be on the*
(3.) Mathematics. } *higher standard.*

(4.) One of the following, viz., Latin or Greek, *if not already taken;* French, German, Italian,—all of the higher standard. Dynamics.

See Sections III. to V. inclusively of the Ordinance (pages 110-112).

The Preliminary Examination for the degree of Bachelor of Science in Pure and in Applied Science, and the conditions with respect thereto, are the same, in all respects, as for the Preliminary Examination in Arts, except as follows :—(1) French or German may be substituted for Latin or Greek ; (2) Mathematics must be passed on the higher standard ; (3) a Degree in Arts (not being a Degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University, will exempt from the Preliminary Examination for Degrees in Science.

The Joint Board have directed that the Preliminary Examination for degrees in Arts, Science, and Medicine for October 1893, shall be as follows :—

I. Preliminary Examination in Arts and Science.

1. English will include Grammar, Composition, Literature, History, and Geography.

(*a*) *Grammar* will include Analysis, Parsing, Derivation, and Correction of sentences.
(*b*) *Composition* will include an Essay and Paraphrasing.
(*c*) *Literature* will include a general knowledge of the life and works of the greater writers, and a more special knowledge

of the works of two or three of these writers; and that for next October the special subjects will be Shakespeare's "Macbeth" and "As You Like It," and Scott's "Antiquary" and "Old Mortality."

(*d*) *Geography* will include a general knowledge of the Geography of the World, and a special knowledge of the Geography of the British Empire.

(*e*) *History* will include a knowledge of one of the three following periods to be taken in successive years in the order herein mentioned, namely:—The Outlines of the History of both England and Scotland (*a*) to the Accession of James VI. [for October 1893]; (*b*) from the Accession of James VI. to the Union of the Kingdoms; (*c*) from the Union of the Kingdoms to the Reform Bill of 1832.

2. The *Latin* Examination on the Higher Standard will be—Translation, Prose Composition, and Grammar and Sentences.

3. The *Greek* Examination on the Higher Standard will be—Translation, Sentences, and Grammar.

The passages for Translation both from Greek and Latin will include Prose and Verse.

4. The *Latin* Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, and Grammar and Sentences.

5. The *Greek* Examination on the Lower Standard will be—Translation and Parsing, Sentences, and Grammar.

6. The paper in Mathematics on the Lower Standard will include questions on Arithmetic, Algebra, and Geometry.

Each question in Geometry will consist of two parts, of which one will be an easy deduction or illustrative exercise on the proposition set as bookwork.

7. The paper in Mathematics on the Higher Standard will include questions on Geometry, Algebra, and Trigonometry. The proportion of the paper devoted to these subjects respectively shall be, as nearly as possible, two-fifths to Geometry, two-fifths to Algebra, and one-fifth to Trigonometry.

The questions on Geometry will be constructed on the principle already laid down as to the geometrical part of the paper on the Lower Standard.

Candidates who having taken the Examination on the Higher Standard in any subject have obtained a sufficient percentage of marks, shall be held to have passed the Examination on the Lower Standard.

8. The paper on Dynamics will include elementary statics and kinetics of solids, liquids, and gases.

The questions will be directed to test the Candidate's knowledge of the fundamental principles of the subjects, and will not involve algebraical or geometrical difficulties. As far as possible each question will consist of two parts, one of which will be a numerical, or other simple illustrative example of the principle with which the other part of the question deals.

9. For the Examination in French and German—
    - (*a*) Two papers will be set, both in French and German; the first paper to contain a passage for translation from English into French or German, with some short sentences of an idiomatic character; the second paper will contain a set of grammatical questions, two passages for translation into English (one in Verse, one in Prose), and a selection of Literary, Philological, or Historical questions, from which the candidate will be allowed to choose *one only.*
    - (*b*) An hour and a half will be allowed for the first paper, and two hours for the second.

2. Preliminary Examination for Degrees in Medicine.

For the Medical Preliminary Examination in October 1893, the papers set in Latin, Greek, and Mathematics, shall be the same as those set on the Lower Standard in these subjects in the Arts Preliminary Examination.

The papers set in English, French, and German shall be of a lower Standard than those set in these subjects in the Preliminary Examination in Arts.

It shall be in the option of any Candidate for the Medical Preliminary to take the papers set on the higher standard for the Arts Preliminary in any of the subjects.

Excellence in one or more subjects will be permitted to compensate in some measure for deficiency in any of the other subjects. Such excellence may be shown either by attaining a high percentage of marks on the Lower Standard, or by passing on the Higher Standard.

Candidates who, having taken English, Latin, Greek, Mathematics, or a modern language, on the Higher Standard, as prescribed by the Arts Ordinance for the Arts Preliminary, have obtained a satisfactory percentage of marks, shall be held to have passed the Medical Preliminary in these subjects.

EQUIVALENTS FOR PRELIMINARY EXAMINATION FOR ARTS, SCIENCE, AND MEDICINE.

A Statement of the Examinations (if any), which will be received as equivalents for the Preliminary Examinations, will be issued shortly.

Dates of Entering for Preliminary Examination and for Payment of Fees.

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates who intend to present themselves for Examination may obtain Schedules at the Matriculation Office, University (Old) Buildings, which must be completed and lodged and the fees paid at that office, not later than 22nd September 1893 and 21st March 1894 for the autumn and spring Examinations respectively.

Candidates who cannot attend personally to pay the fees should transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, and not by cheques on private accounts. When names are not entered nor Fees paid on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. A Candidate is not held to be entered for the Examination until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

Time-Tables for Preliminary (for Arts, Science, and Medicine) and Bursary Examinations for 1893-94.

		Medical Preliminary Examinations.	Arts and Science Preliminary Examinations.
1893. Sept. 30	Sat.	... ...	Additional English for Bursaries, 9-12[1,4] Italian, 1-4
Oct. 2	Mon.	English, 9-11, 11-1 Latin, 2-5	English, 9-11, 11-1[1,2,4] Lower Latin, 2-5[2]
,, 3	Tu.	Greek, 9-12 Mathematics, 1-4	Lower Greek, 9-12[2] Lower Mathematics, 1-4[2]
,, 4	Wed.	French, 9-12 German, 2-5	French, 9-10.30, 10.30-12.30[4] German, 2-3.30, 3.30-5.30[4]
,, 5	Th.	Logic, 9-12[3] Moral Philosophy, 1-4[3]	Higher Latin, 9-12[1,4] Latin for Second and Third Year Bursaries, 9-12 Higher Greek, 1-4[1,4] Greek for Second and Third Year Bursaries, 1-4

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[1] Papers for the Ordinary First Year Bursary Examination. Candidates for Bursaries only, in October 1893, are not required to take History and Geography.

[2] Also Papers for the Preferential Bursary Examination.

[3] For Students under the Old Regulations.

[4] Papers for Heriot Bursaries.

		Medical Preliminary Examinations.	Arts and Science Preliminary Examinations.
1893.			
Oct. 6	Fri.	Higher Mathematics, 9-12[2] Mechanics, 1-4[2]	Higher Mathematics, 9-12[1,3] Mathematics for Second and Third Year Bursaries, 9-12 Dynamics, 1-4 Logic and Psychology for Third Year Bursaries, 1-4
,, 7	Sat.	Natural Philosophy, 9-12[2]	Additional Latin and Greek for Ordinary Bursaries, 9-12[1,3] Classics for Second and Third Year Bursaries, 9-12 Additional Mathematics for Bursaries, 2-4[1,3] Mathematics for Second and Third Year Bursaries, 2-4
,, 9	Mon.	... .	Higher Geometry for Heriot Bursaries and for Kelland Prize, 9-12[3] Gaelic for Macpherson Bursary, 9-12
,, 10	Tu.	MEETING OF PRELIMINARY EXAMINERS.	
,, 11	Wed.	MEETING OF JOINT BOARD.	
,, 17	Tu.	ARTS CLASSES OPEN.	
1894.			
Mar. 30	Fri.	Classes in the Faculty of Arts to close not later than this date.	
,, 31	Sat.	... ...	Italian, 9-12
Apr. 2	Mon.	English, 9-11, 11-1 Latin, 2-5	English, 9-11, 11-1 Lower Latin, 2-5
,, 3	Tues.	Greek, 9-12 Mathematics, 1-4	Lower Greek, 9-12 Lower Mathematics, 1-4
,, 4	Wed.	French, 9-12 German, 2-5	French, 9-10.30, 10-30-12.30 German, 2-3.30, 3.30-5.30
,, 5	Thur.	Logic, 9-12[2] Moral Philosophy, 2-5[2]	Higher Latin, 9-12 Higher Greek, 2-5
,, 6	Fri.	Higher Mathematics, 9-12 Mechanics, 2-5[2]	Higher Mathematics, 9-12 Dynamics, 2-5
,, 7	Sat.	Natural Philosophy, 9-12[2]	... ...
,, 9	Mon.	... ...	... ...
,, 10	Tues.	MEETING OF PRELIMINARY EXAMINERS.	
,, 11	Wed.	MEETING OF JOINT BOARD.	

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[1] Papers for the Ordinary First Year Bursary Examination. Candidates for Bursaries only, in October 1893, are not required to take History and Geography.

[2] For Students under the Old Regulations.

[3] Papers for Heriot Bursaries.

TIME-TABLES FOR M.A. EXAMINATIONS FOR 1893-94.

		M.A. Examinations.	M.A. Honours Examinations.[1]
1893.			
July 3	Mon.	Constitutional Law & History, 3	
,, 4	Tu.	Roman Law, 10 and 2 Constitutional Law & History, 3	
,, 6	Th.	Public Law, 10	
,, 15	Sat.	Practical Chemistry (& following days at hours to be announced)	
,, 17	Mon.	Chemistry, 10 Botany, 1	
,, 18	Tu.	Natural History, 10 Geology, 1 Oral Examinations in Science Subjects begin	
Oct. 10	Tu.	English, 9-11, 11.30-1.30 Latin, 2.30-4.30	
,, 11	Wed.	Latin, 9-11 Greek, 11.30-1.30, 2.30-4.30	
,, 12	Th.	Mathematics, 9-11, 11.30-1.30 Natural Philosophy, 2.30-4.30	
,, 13	Fri.	Natural Philosophy, 9-11 Logic, 11.30-1.30, 2.30-4.30	
,, 14	Sat.	Moral Philosophy, 9-11, 11.30-1.30	
,, 17	Tu.	ARTS CLASSES OPEN	
,, 30	Mon.	Constitutional Law & History, 3	
,, 31	Tu.	Roman Law, 10 and 2 Constitutional Law & History, 3	
Nov. 2	Th.	Public Law, 10 and 2	
1894.			
Mar. 22	Th.	Sanskrit, 9-11, 11.30-1.30 Arabic and Syriac, 2.30-4.30	
,, 24	Sat.	Practical Chemistry (& following days at hours to be announced) Arabic and Syriac, 9-11	

NOTE.—In the Examinations for the Degree of M.A. in Roman Law, Public Law, and Constitutional Law and History, separate papers will be set for the ordinary Degree of M.A., but candidates who intend to proceed later to the Degree of LL.B. must pass on LL.B. standard.

[1] Honours Students are warned that after April 1894, the Honours Examinations will be held simultaneously with certain of the Pass Examinations, so that it may not in all cases be possible to sit for a Pass and for an Honours Subject at the same time.

		M.A. Examinations.	M.A. Honours Examinations.[1]
1894. Mar. 26	Mon.	Chemistry, 10 Botany, 1	
,, 27	Tu.	Zoology, 10 Geology, 1 Oral Examinations in Science Subjects begin	
,, 28	Wed.	Celtic, 9-11, 11.30-1.30 Hebrew, 2.30-4.30	
,, 29	Th.	Hebrew, 9-11 Astronomy, 11.30-1.30, 2.30-4.30	
,, 30	Fri.	Education, 9-11, 11.30-1.30 Archæology and Art, 2.30-4.30 Classes in the Faculty of Arts to close not later than this date.	
,, 31	Sat.	Archæology and Art, 9-11 History, 11.30-1.30, 2.30-4.30	
Apr. 2	Mon.	English, 9-11, 11.30-1.30 Political Economy, 2.30-4.30	Logic, 2-5
,, 3	Tu.	Political Economy, 9-11 Logic, 11.30-1.30, 2.30-4.30	Logic, 9-12, 1-4
,, 4	Wed.	Moral Philosophy, 9-11, 11.30-1.30 Greek, 2-30-4.30	Moral Philosophy, 9-12 Latin, 2.30-5.30
,, 5	Th.	Latin, 9-11, 11.30-1.30 Greek, 3-5	Latin, 9-12, 2-5
,, 6	Fri.	Mathematics, 9-11, 11.30-1.30 Natural Philosophy, 3-5	Pure Mathematics, 9-12, 2-5
,, 7	Sat.	Natural Philosophy, 9-11	Pure Mathematics, 9-12 Natural Philosophy, 1-4 Greek, 9-12, 1-4 Moral Philosophy, 9-12, 1-4
,, 9	Mon.	. . … … …	Natural Philosophy, 9-12, 1-4 Greek, 9-12
,, 11	Wed.	MEETING OF M.A. EXAMINERS FOR OLD SUBJECTS.	
,, 13	Fri.	GRADUATION CEREMONIAL. COMMEMORATION SERVICE.	

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[1] The order of the papers set at the particular hours fixed for the general Honours Subjects within any department, may be varied at the discretion of the Examiners. Honours Students are warned that after April 1894, the Honours Examinations will be held simultaneously with certain of the Pass Examinations, so that it may not in all cases be possible to sit for a Pass and for an Honours Subject at the same time (see footnote, page 124).

PASS EXAMINATIONS FOR MASTER OF ARTS.

(See Time-Table, pages 124 and 125.)

The subjects for the Examinations for the Ordinary Degree in October 1893 and Spring 1894 are as follows :—

I.—Department of Language and Literature.

1. *Latin.*

Horace, *Satires*, Book i.
Vergil, vi., vii., viii.
Juvenal, *Sat.*, x.
Cicero, *Pro Sulla.*
Tacitus, *Agricola.*
A passage from a Latin Author not prescribed.
Latin prose composition.
Roman History.—A general knowledge of Roman history to the death of Augustus, and a special knowledge of the period from B.C. 60 to A.D. 37.
Roman Literature.—A general knowledge of the course of Roman Literature till the end of the Augustan age, and a more special knowledge of the Lives and Works of Vergil, Horace, Cicero, and Tacitus.
Translation from English into Latin prose is required of every Candidate.

2. *Greek.*

Homer, *Iliad*, Book xvi.
Aristophanes, *Acharnians* (Merry's Edition).
Herodotus, Book vii.
Demosthenes, *On the Chersonese*, and *Philippic III.* (Abbott and Matheson.)
A passage from a Greek Author not prescribed.
Greek prose composition.
Greek History.—A general knowledge of Greek History to the death of Alexander, and a more special knowledge of the period embraced by the Persian Wars.
Greek Literature.—A general knowledge of the course of Greek Literature, and a special knowledge of the prescribed Authors.
Laws of Hexameter and Iambic verse.

3. *English.*

The Principles of English Composition and Style: Class Lectures.

History of the English Language: The First Five Chapters of Morris's "Historical Outlines of English Accidence."

History of English Literature, more particularly from 1350 to 1688: Lectures, with Morley's Text Book, and the portions of Hallam's "Literature of Europe" that relate to English writers of the time mentioned.

Special Readings required:—

Shakespeare's *Love's Labour's Lost* and *Tempest.*

Milton's *Lycidas*, and Tennyson's *In Memoriam.*

De Quincey's Essay entitled "*Rhetoric*," and Milton's *Areopagitica.*

Wordsworth's *Prose Prefaces, &c., to his Poems*, with Book I. of his *Excursion.*

4. *French.*

Molière, *L'Avare.*

V. Hugo, *L'Œuvre complète*, *Extraits*, Part I. (Poetry).

H. de Balzac, *Eugénie Grandet.*

Mignet, *Histoire de la Revolution Française* (Williams & Norgate).

Passages from French Authors not prescribed.

A general knowledge of the development of the French Language.

A general knowledge of French History, and of the History of French Literature, with a more minute knowledge of the period 1680-1780.

5. *German.*

Schiller, *Wilhelm Tell.*

Gœthe, *Hermann und Dorothea.*

Becker's *Friedrich der Grosse* (ed. Buchheim, Clarendon Press).

J. v. Devall, *Nazzarena Danti* (Williams & Norgate).

Passages from German Authors not prescribed.

A general knowledge of the development of the German Language.

A general knowledge of German History, and of the History of German Literature, with a more minute knowledge of the period 1740-1820.

6. *Sanskrit and Comparative Sanskrit.*

Hitopadeśa, book i.

Nala, cantos 1-10.

Sanskrit Grammar.

Sanskrit Prose Composition.

A general knowledge of the course of Sanskrit Literature.

7. *Hebrew and Oriental Languages.*

Hebrew.

1. Questions in Grammar.
2. Translation into Hebrew Prose.
3. Samuel, books 1 and 2.
   Kings, books 1 and 2.
   Joshua.
   Psalms, book 4.
4. *Jewish History* from B.C. 1010-598.

Syriac.

1. Questions in Grammar.
2. Translation into Syriac Prose.
3. Sections i., iii., ix., xii., xxiv., and xxx. of Rœdiger's *Chrestomathia-Syriaca* (Ed. 1892), and Chrestomathy in Nestle's Grammar.

Arabic.

1. Questions in Grammar.
2. Translations into Arabic Prose.
3. Arnold's *Chrestomathia Arabica*—Sections i., ii., iii., iv.
4. *Arabian History.*—Sir W. Muir's *The Caliphate:* its Rise, Decline, and Fall.—Chapters 1-45 and 64-67.

8. *Celtic.*

Modern Gaelic (Scottish and Irish)—MacDonald's Poems, *or* Keating's Three Shafts of Death.

Old Gaelic.—Fis Adamnáin (Windisch's Irische Texte).

Passages in Old and Modern Gaelic (both Scottish and Irish) from Authors not prescribed.

Translation from English into Gaelic Prose (Scottish).

The History, more especially the Literary History, of the Gael before the year 1000 A.D.

II.—DEPARTMENT OF MENTAL PHILOSOPHY.

1. *Logic and Psychology.*

The elementary doctrines of Logic and Psychology.

Descartes's Discourse on Method.

Locke's *Essay*, Book ii., Chapters 1-12, and Chapter 23, along with "*Locke*," in "Philosophical Classics" (Blackwood), Professor Fraser's "*Selections from Berkeley*" (fourth edition),—"Editor's Introduction" (pp. ix. to liii.); "Principles of Human Knowledge" (Part I. sect. 1-84, and 135-156); "Divine Visual Language: A Dialogue."

2. *Moral Philosophy.*

Professor's "Handbook of Moral Philosophy;" Butler "On Human Nature;" Mill's "Utilitarianism;" Sidgwick's "Outlines of the History of Ethics," Chapters ii. and iv.

3. *Political Economy.*

The subjects of examination are: The Lectures of the Professor; Mill's *Principles of Political Economy*, Books i.-iii.; Marshall's *Economics of Industry* (*new edition*); Adam Smith's *Wealth of Nations*, Book iv.; Professor Nicholson's *Money and Monetary Problems*, Part I.

4. *Theory, Art, and History of Education.*

Theory and Art.—The subjects of examination are: Lectures of the Professor; *Locke's Thoughts* (the parts which deal with moral training); *Locke on the Conduct of the Understanding; Language and Linguistic Method in the School, by Professor Laurie: Comenius' Great Didactic.*

The Theory or Science of Education comprises the Psychology and Ethics in the "*Institutes of Education.*"

History.—Hellenic and Roman Education, as in the Lectures. A general knowledge of the History of Education (with the exception of the period from the 3rd to the 10th century A.D.), Quick's Educational Reformers, or Compayré's Manual of the History of Pedagogy will suffice.

5. *Philosophy of Law.*

(*See under "Public Law."*)

III.—DEPARTMENT OF SCIENCE.

1. *Mathematics.*

Arithmetic.

Euclid, Books i., ii., iii., iv., vi., and xi., or their equivalent, with their application to Mensuration.

Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

Candidates must show sufficient knowledge in each of the subjects of examination.

2. *Natural Philosophy.*

Elementary Dynamics.

Astronomy and Experimental Physics.

Candidates must show sufficient knowledge both of Dynamics and of Experimental Physics.

3. *Practical Astronomy.*

The Class Lectures—

Use of the Sextant, Transit-Circle and Ring Micrometer.

Young's General Astronomy; Main's Practical and Spherical Astronomy, or corresponding portions of Brünnow's Astronomy. Sir John Herschel's Outlines of Astronomy, omitting Part IV.

4. *Chemistry.*

Classification of Elements. General Laws of Chemical Combination and Action, as illustrated in the simpler compounds of the more commonly occurring elements.

Symbolic Notation.

Preparation and Properties of the Non-Metallic Elements and their chief Compounds. Atomic Theory. Combining Volumes of Gases. Relation of Volume of Gas to Temperature and Pressure.

General Properties of Acids, Bases, and Salts—Electrolysis of Salts.

Oxygen, Ozone, Oxidation, and Reduction.

Hydrogen, Water, Peroxide of Hydrogen, Chlorine, Hydrochloric Acid, Hypochlorites, Chlorates, Bromine, Hydrobromic Acid, Iodine, Hydriodic Acid, Iodates, Fluorine, Hydrofluoric Acid. Sulphur, Sulphuretted Hydrogen, Oxides of Sulphur, Sulphites, Sulphates, Thiosulphates, Nitrogen, The Atmosphere, Oxides of Nitrogen, Nitrates, Nitrites, Ammonia, Ammonium Salts, Phosphorus, Oxides of Phosphorus, Chlorides and Oxychloride of Phosphorus, Phosphates, Phosphites, Hypophosphites, Boron, Boracic Acid, Borates, Silicon, Silica, Silicates, Chloride of Silicon, Fluoride of Silicon, Hydrofluosilicic Acid.

Carbon, Oxides of Carbon, Carbonates, Phosgene. Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methylic and Ethylic Alcohols and Ethers. Methylamine, Dimethylamine, Trimethylamine, Tetramethylammonium. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Products of Distillation of Wood and of Coal. Benzene, Benzoic Acid, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea.

The following metals, their Oxides, Sulphides, and more important Salts. Potassium, Sodium, Magnesium, Calcium, Strontium, Barium, Aluminium, Zinc, Manganese, Chromium, Iron, Bismuth, Lead, Copper, Mercury, Silver, Tin, Gold, Platinum, Antimony, Arsenic.

Simple Qualitative Analysis. [*The Examination in Analysis is conducted practically.*]

5. *Zoology.*

(*a.*) The General Principles of Biology.

(*b.*) The distinctive characters of the Invertebrate groups, and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c.*) The distinctive characters of the Chordata groups, and the structure, habits, &c., of Myxine, Raia, Clupea, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d.*) The skeletons of Crocodilus, Equus, Felis catus, Balæna, Vespertilio, and Simia (Orang).

(*e.*) A general knowledge of the orders of Sauropsida and Mammalia.

(*f.*) The structure and life-history of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g.*) The more important facts of the development of Scyllium, Gallus and Lepus.

(*h.*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

In addition to the above subjects, Candidates will require to possess a general knowledge of Wallace's "Darwinism."

6. *Botany.*

The characteristic features of the following groups and classes of the vegetable kingdom :—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental points of Morphology, Physiology, Distribution, and Ætiology of Plants.

The life-histories of the following plants :—Bacterium, Nostoc, Spirogyra, Vaucheria, Fucus, Polysiphonia, Mucor, Pythium, Saccharomyces, Agaricus, Collema, Puccinia, Claviceps, Eurotium, Marchantia, Funaria, Aspidium, Equisetum, Selaginella, Pinus, Scilla, Capsella, Helianthus, Ulmus.

The characters of plants belonging to the chief British natural orders of Phanerogamæ.

7. *Geology including Mineralogy.*

1. *Dynamical Geology.*—The nature and operation of geological agents :—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy.*—Characters of the more important rock-forming minerals.

3. *Petrology.*—Macroscopic and Microscopic Characters, Composition, Origin and Distribution of the more important Rocks.

4. *Structural Geology.*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Stratigraphical Geology.*—The History of the Geological Systems of the British Islands.

6. *Palæontological Geology.*—Characters, and distribution in time, of the more important Genera and Orders found fossil in Britain.

7. *Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

IV.—DEPARTMENT OF HISTORY.

1. *History.*

The Subject of Examination will be, until further notice, the History of the British Empire, viz. :—(1) History of England from A.D. 450 to 1688, in outline ; (2) History of the Empire from 1688 to 1832, in fuller detail ; and (3) Fortescue's "Governance of England" (ed. by Plummer ; Clarendon Press).

Some acquaintance with original texts in at least (*a*) Old English or Latin, and (*b*) one modern language will be required.

The Examiners will attach greater importance to a grasp of principles than to mere memory work.

For elementary purposes candidates are referred to Gardiner's "Student's History," or to Green's "Short History," or to Bright's "History of England." For further study the histories by Lord Mahon and Mr Lecky are recommended, and those of Mr Hallam (vol. iii.) and Sir T. Erskine May may also be consulted.

2. *Archæology and Art* (*History of*).

The subjects for examination will be the Class lectures, the Professor's Manual "The Fine Arts," Conway's "Dawn of Art in the Ancient World," Paris's "Manual of Ancient Sculpture," Woltmann's "History of Painting," Vol. i., Part 2, Poynter's "Classic and Italian Painting." Candidates will be expected to show some knowledge of the original authorities for the different periods of Art History.

3. *Constitutional Law and History.*

The subject of examination is the Constitutional Law and History of England, as treated of in the works of Stubbs, Hallam, and May, with occasional reference to the constitutions of other countries. See also under "Graduation in Law." The examinations will be held at the same time as those in the Faculty of Law, viz., on the first Monday in July and the last Monday in October.

4. *Roman Law.*

The subjects for examination will be (1) The history of the law from the foundation of Rome to Justinian, and the doctrines of the law so far as relating to (*a*) The Personal and Domestic Relations, and (*b*) Property and Real Rights. Maine's "Ancient Law," and Muirhead's "Historical Introduction," are recommended for the historical part of the examination ; and Gaius' Institutes, Bk. i. and Bk. ii., §§ 1-96, and Justinian's Institutes, Bk. i. and Bk. ii., Tits. i.-ix., must be professed for the doctrinal part.

5. *Public Law.*

I. The Philosophy of Law.

(*a*) The Science of Natural Law ; Lorimer, Institutes of Law ; Ahrens, Cour de Droit Naturel ; Bluntschli, The Theory of the State. (*b*) The

Science of Positive Law; The Student's Austin; Holland Jurisprudence; Sir H. Maine's Works.

II. Public International Law.

Wheaton's "History of the Law of Nations," Hall's "International Law." *See* Faculty of Law.

EXAMINATIONS FOR GRADUATION IN ARTS WITH HONOURS.

(*Examinations for Honours are held in April only.*)

See Time-Table of Examinations, p. 125.

The subjects of Examination for the Degree of Master of Arts with Honours in April 1894 are as follows :—

A.—CLASSICS.

1. *Latin for April* 1894.

Plautus, *Mostellaria, Rudens.*
Lucretius, v.
Vergil, *Aeneid*, iv., v., vi., vii.
Horace, *Odes.*
Propertius (Postgate's selections, *Macmillan*).
Juvenal, with omission of ii., vi., ix.
Cicero, *de Oratore*, i., ii.
Tacitus, *Histories*, i., ii., iii., iv.
Latin prose composition, and translation from Authors not prescribed.
Roman History.—A general knowledge of Roman History to the end of the first century A.D., and a more minute knowledge of the period from B.C. 494 to B.C. 339.
Roman Literature.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Authors prescribed.

Latin for April 1895.

Plautus, *Trinummus, Captivi.*
Vergil, *Aeneid*, ix., x., xi., xii.
Horace, *Satires, Epistles, Ars Poetica.*
Propertius (Postgate's selections, *Macmillan*).
Martial, Bks. i.-vi. (in Sellar & Ramsay's selections).
Cicero, *Philippics.*
Tacitus, *Annals*, i., ii., iii., iv.
Latin prose composition, and translation from Authors not prescribed.
Roman History.—A general knowledge of Roman History to the end of the first century A.D., and a more minute knowledge of the period from B.C. 100 to A.D. 69.

Roman Literature.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Authors prescribed.

2. *Greek for April* 1894.

Homer, *Odyssey* (xiii.-xxiv.).
Pindar, *Nemean* and *Isthmian Odes.*
Aeschylus, *Thebans and Persians.*
Plato, *Phaedo.*
Aristotle, *Nic. Ethics*, i.-iv. (inclusive), and x.
Greek Prose Composition.
Translation from Authors not prescribed.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution.

Greek Literature.—A general knowledge of the course of Greek Literature, and a more minute knowledge of the Authors prescribed.

Greek Grammar.—As a special subject *Monro's* Homeric Grammar.

Comparative Philology.—The principles of *Comparative Philology* as applied to Latin and Greek. Text-book recommended, "Sounds and Inflexions in Greek and Latin," by King and Cookson.

Or, instead of *Comparative Philology*, one of the optional subjects, such as Ancient Philosophy, or Classical Archæology, recognised under the New Ordinances for Graduation with Honours.

Greek for April 1895.

Homer, *Iliad*, i.-vi.
Greek Lyric Poetry (Farnell's Edition, *Longmans*, 1891).
Aeschylus, *Agamemnon*, *Eumenides*, and *Choephoroe.*
Thucydides, i. and ii.
Aristotle, *Poetics*, omitting chapters xx. and xxv. (Vahlen's text).
Greek Prose Composition.
Translation from Authors not prescribed.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution.

Greek Literature.—A general knowledge of the course of Greek Literature, and a more minute knowledge of the Authors prescribed.

Greek Grammar.—As a special subject *Monro's* Homeric Grammar.

Comparative Philology.—The principles of *Comparative Philology* as applied to Latin and Greek. Text-book recommended, "Sounds and Inflexions in Greek and Latin," by King and Cookson.

Or, instead of *Comparative Philology*, one of the optional subjects, such as Ancient Philosophy, or Classical Archæology, recognised under the New Ordinances for Graduation with Honours.

B.—MENTAL PHILOSOPHY.

1. *Logic and Metaphysics for April* 1894 *and April* 1895.

The more advanced doctrines of Logic and Psychology.
A competent knowledge of the History of Philosophy.

Plato, *Theætetus.*
Aristotle, *Metaphysics*, Book i.
Spinoza, *Ethics*, Parts i., ii.
Locke, *Essay concerning Human Understanding*, in connection with "*Locke*" in "Philosophical Classics" (Blackwood).
Berkeley, in "Philosophical Classics" (Blackwood); also "*Selections from Berkeley*" (fourth edition).
Hume, *Treatise on Human Nature*, Book i. (Of the Understanding).
Kant, *Critique of Pure Reason.*
Hegel's *Logic* in Professor Wallace's translation, chapters i.-vi.
Lotze's *Metaphysics*, Book i. (Clarendon Press).

2. *Moral Philosophy.*

The Class Lectures for Advanced Students.
Plato's *Protagoras.*
Plato, *Republic.*
Aristotle, *Ethics* (omitting v., vi., vii.)
Spinoza, *Ethics*, Parts iii., iv., v.
Kant, *Groundwork of the Metaphysic of Ethics.*
Hegel's *Philosophy of the State* (Grigg's German Philosophical Classics).
Sidgwick's *Methods of Ethics* Books iii. and iv.
Green's *Prolegomena of Ethics*, Books ii. and iii.
Herbert Spencer's *Data of Ethics* and *Justice.*

C.—MATHEMATICS AND NATURAL PHILOSOPHY.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative.*

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

FEES FOR DEGREE OF M.A.

The Fee for the Degree of Master of Arts (M.A.), with or without Honours, is £5, 5s.

Candidates for the Ordinary Degree pay 15s. for each subject.

Candidates who have paid for subjects for the Ordinary Degree, and who afterwards appear for Honours, pay the balance (if any due) of the £5, 5s.

DATES OF ENTERING FOR EXAMINATIONS FOR DEGREE OF M.A. (ORDINARY AND WITH HONOURS), AND FOR PAYMENT OF FEES.[1]

Candidates for Examination may obtain Schedules on application at the Matriculation Office.

Schedules must be lodged, Certificates shown, and Fees paid as follows :—

1. For the Examinations in July 1893 in Constitutional Law and History, Roman Law, and Public Law, not later than 26th June, and in Chemistry, Botany, Zoology, and Geology not later than 8th July.

2. For the Examinations in October, not later than 3rd October.

3. For the Examinations in Chemistry, Botany, Zoology, and Geology in Spring of 1894, not later than 19th March.

4. For the other Spring Examinations the Schedules must be lodged and the Fees paid not later than 16th March, and the Matriculation Tickets and Class Certificates must be shown as follows :—For the Examinations in March at least *two clear days before* the dates of the Examination in each subject ; for the Examinations in April, *not later than 30th March.* When the Candidate has exhibited all the Matriculation Tickets and Certificates required for the Examination, the Clerk will stamp on the Receipt for the Fee the words, "Certificates examined," which will entitle the Candidate to admission to the Examination, on producing the Receipt at the Examination Hall.

Candidates who have, in a former year, passed all the Examinations necessary for Graduation, but without having taken the Degree, and who desire to present themselves for Graduation in April 1894, must enter their names and addresses, show their Certificates, and pay the Fees at the *Matriculation Office, at least ten days previously.*

Candidates for Examination or for Graduation, must be Matriculated Students of the year in which they appear for Examination or for Graduation.

Every Candidate for Graduation who has passed the Examination at the end of the Session, immediately before the date of the Graduation Ceremonial must produce certificates of having passed the necessary Examinations and pay the Fee of £1 for

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[1] When names are not entered nor fees paid on or before the stated dates, an additional or late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, the Fee paid, and all the necessary Certificates, &c., lodged.

Registration as a Member of the General Council *at least one clear day before the date of Graduation.*

The fees for Matriculation, for Examinations for Degrees, and for Registration of Graduates as Members of the General Council, are payable at the Matriculation Office, University. When Candidates cannot attend personally to pay the fees, they should transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed "*Union Bank of Scotland* (*Hunter Square Branch*), *Edinburgh*," and not by cheques on private accounts.

At the Public Ceremonial of Graduation in Arts, held annually in April, the Degree of MASTER is conferred by the Chancellor or the Vice-Chancellor of the University, in name of the Senatus Academicus. Degrees are not conferred on any who are not present at the Graduation Ceremonial, and who have not signed the *Sponsio*, although they may have passed all their examinations. Those who are presented to receive the degree must appear in Academic costume, and with the hood proper to the Degree.[1] [2]

B.—REGULATIONS OF THE UNIVERSITY OF EDINBURGH RELATIVE TO THE DEGREE OF MASTER OF ARTS (M.A.), APPLICABLE TO ALL WHO HAD ENTERED ON THEIR ACADEMICAL COURSE BEFORE 1ST OCTOBER 1892.[3]

The Degree of Master of Arts admits to the General Council of the University, to professional Study for the Learned Professions, to the Army, &c. Under recent regulations, framed in virtue of the Education Act (1872), *the Degree qualifies for Masterships of Public Schools, subject to an examination in the methods of instruction, and three months' attendance in a Public School for the practice of teaching.*

I. The ordinary Course of Study necessary for the Degree of Master of Arts (except in the circumstances mentioned in the following Article) extends over FOUR WINTER SESSIONS, and includes attendance for *not less than two Sessions* on the Classes of Humanity (Latin), Greek, and Mathematics respectively; attendance for not less than one Session on the Classes of Logic and Metaphysics, Moral Philosophy, and Natural Philosophy respectively; and also attendance on the Class of Rhetoric and English Literature.

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[1] Black silk lined with *white*.

[2] Immediately after obtaining the Degree, Candidates should apply for their Diplomas at the Matriculation office. There is no additional charge for the Diploma. Any Graduate who cannot apply personally is required to give written authority to some person to receive and give a receipt for it.

[3] The annual amount of Matriculation, Class Fees, &c., of the regular course in Arts may be estimated at about £10, 10s.

II. Any Student who, at the time of his Entrance to the University shall satisfy the Professors of the Faculty of Arts, on Examination, that he is qualified to attend the Higher Classes of Latin, Greek, or Mathematics, or any one of them, may be admitted to such Higher Class or Classes without having previously attended the Junior Class or Classes in the same department. When a Student has been thus considered by the Faculty of Arts to be qualified for admission to the Higher Classes both of LATIN and GREEK, without having previously attended the First or Junior Latin and Greek Classes, his Course of Study for the Degree of Master of Arts may be completed within THREE WINTER SESSIONS, instead of Four. And no Student who is thus qualified for admission to the Higher Class of LATIN and GREEK, or of MATHEMATICS, without having previously attended the First or Junior Class in the same department, is required to give attendance in Latin, Greek, or Mathematics respectively, for more than *one* Session, as a necessary part of the Course of Study for the Degree of Master of Arts.

III. In pursuing the Course of Study for the Degree of Master of Arts, no Student is permitted to pass from the Junior to the Higher Class, unless the Professor is satisfied of his fitness to enter the Higher Class.

IV. It is in the power of any Student, who has given attendance during one or more Sessions in any Scottish University, to complete his Course of Study, by giving attendance in the University of Edinburgh during the remaining Sessions of his Course; provided always that every such Student gives attendance in the University of *Edinburgh* during, at least, the *last Two Sessions* of his Course ; and provided also that he produces, to the satisfaction of the Faculty of Arts of the University of Edinburgh, Class Certificates of his attendance at the former Scottish University—but he must be examined in all the three Departments necessary for the Degree of Master of Arts by the Examiners of the University of Edinburgh.

V. Candidates for the Degree of Master of Arts must be examined on all the subjects of instruction embraced in the above Course of Academical Study ; and the examinations may be conducted wholly in writing or partly *viva voce.*

VI. Any Student who has completed his attendance on the Classes of

LATIN AND GREEK,

required in the prescribed Course of Study, may be examined on these Subjects, at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

In like manner, any Student who has completed his attendance on the Classes of

LOGIC AND METAPHYSICS, MORAL PHILOSOPHY, AND RHETORIC AND ENGLISH LITERATURE,

may be examined on these Subjects, at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

Also in like manner, any Student who has completed the attendance required in the prescribed Course of Study on the Classes of

MATHEMATICS AND NATURAL PHILOSOPHY,

may be examined on these subjects at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

And if such Student shall satisfy the Examiners, when so examined, in the Department of CLASSICAL LITERATURE, which comprehends Latin and Greek—or in the Department of PHILOSOPHY, which comprehends Logic and Metaphysics, Moral Philosophy, and Rhetoric and English Literature—or in the Department of MATHEMATICS and PHYSICS, which comprehends pure Mathematics and Natural Philosophy, he shall receive from them a CERTIFICATE to that effect, and he shall not be examined again in the same Department, as a condition of his taking the Degree of Master of Arts.

The papers for the Examinations under the old Regulations are the same as those in the corresponding subjects for the Degree of M.A. under the new Regulations, and the Examinations take place at the same time.

Names must be entered, Certificates shown, and Fees paid on or before 3rd October 1893, and on or before 16th March 1894 for the Examinations in Autumn 1893 and Spring 1894 respectively.[1]

The Examination fee for the Degree of Master of Arts (with or without Honours) is *Three Guineas.* The fee for Examination of each of the three Departments is *One Guinea.*

GRADUATION IN ARTS WITH HONOURS.

I. Students who have passed the Examinations in the three Departments embraced in the Course of Study prescribed for the

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[1] See footnote, page 136.

Degree of Master of Arts, may, before taking the Degree, offer themselves for a further examination, with a view to Graduation with Honours; and that either in the same year in which they have completed the Pass or Ordinary Examinations, or in a future year. Also, any Student who desires to offer himself for Examination with a view to graduation with Honours, in any one or more departments, may proceed to such Honours Examination, after sufficient attendance on the classes in the department or departments in which he desires to offer himself, without having previously passed the Examination in such department or departments for the Degree of Master of Arts without Honours; and if such Student, in the opinion of the Examiners, fails to attain the standard for Honours in any department, but attains to the standard of the Examination for graduation without Honours, he shall be held to have passed in that Department for the Degree of Master of Arts, without Honours; but if, in any such department, he fails to attain to the standard of the Examination for graduation without Honours he shall not be entitled, until he shall have passed in that department, to the Degree of Master of Arts. And no person, without the permission of the Senatus Academicus, can be admitted to an Examination for *Honours*, after he has ceased, for more than one Winter Session, to be a Matriculated Student, in attendance on a class or classes in the University.

II. There are four departments for Graduation in Arts with Honours, in any one or more of which, subject to the preceding Regulation, Students may present themselves for further Examination, viz.:—

A. CLASSICAL LITERATURE, .	Latin. Greek.
B. PHILOSOPHY, . . .	Logic. Metaphysics. Moral Philosophy.
C. MATHEMATICS AND PHYSICS,	Pure Mathematics. Natural Philosophy.
D. NATURAL SCIENCE, . .	Geology. Zoology. Chemistry. Botany.

III. In each of the first three of the above-mentioned departments, viz., in Classical Literature, in Philosophy, and in Mathematics, there are *two* Grades of Honour, each representing, as nearly as possible, a uniform standard of qualification, and denominated respectively the FIRST CLASS and the SECOND CLASS.

The papers for the Examinations are the same as those in the corresponding subjects for the Degree of Master of Arts with Honours under the new Regulations, and the Examinations take place at the same time.

The names of Candidates must be entered and Fees paid on or before 16th March 1894.[1]

IV. In the department of Natural Science, there is only *one* class for Honours, *and after July* 1893 *the examinations will be held in March only.*

Candidates may select any Two of the above Subjects, in which they will be subjected to examinations equivalent to those in the same subjects for the Final Examination for Bachelor of Science.

Candidates must enter their names on or before 8th July 1893 and 19th March 1894 for the Examinations in July and March respectively.[1]

No one who has ceased for more than one Winter Session to be a Matriculated Student in attendance on a class or classes in the University can be admitted to an Examination for *Honours* without permission of the Senatus Academicus.

G. CHRYSTAL, LL.D.,
Dean of the Faculty of Arts, and
Professor of Mathematics.

SPONSIO ACADEMICA TO BE SIGNED BY GRADUATES IN ARTS.

Nos qui Nomina subsignamus Magisterii titulo jamjam donandi Spondemus nos in omni debitae gratitudinis officio erga Universitatem Academicam Edinburgensem ad extremum vitae halitum perseveraturos.

GRADUATES IN ARTS.

HONOUR LISTS—1889-1893.

The names of all Graduates in Arts with Honours previously to 1889 will be found in the List of Graduates of the University published in 1889.

The contractions Class., Phil., Math., and Nat. Sc., indicate the Departments of Classics, Philosophy, Mathematics, and Natural Science, respectively; and the Italic Numerals, i. and ii., indicate First and Second Class Honours respectively.

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[1] See footnote, page 136.

1889.

Class. i., Patrick Duncan, Harry Angus Alexander Kennedy, Thomas Ross Mills, Jas. Cruickshank Smith, John Tennant.

Class. ii., Robert Alex. Falconer, Alexander Harris Hutt.

Phil. i., Charles Mackinnon Douglas, William George Smith.

Phil. ii., David Walton Vaughan.

Math. i., James Ireland Craig, William Andrew Knowles, Jas. Fairbairn M'Kean.

Nat. Sc., Alexander Bremner, John Brown Clark, David Davidson, John Melvin Lowson, Robert Stewart M'Dougall, John Machray, John Hally Meikle, Harry Fisher Menzies, Alexander Gordon Wallace, John Young.

1890.

Class. i., John Maclennan, James Watt.

Class. ii., William Brereton Dennison, William Barron Stevenson.

Phil. i., Andrew Nisbet Bogle, Duncan Mackenzie, Thomas Dixon Rutherford, James Stewart.

Phil. ii., Henry Reynolds Brown, William Elmslie Wilkie Brown Dempster, Arthur Herbert Gray, Walter Hardie.

Math. i., Charles Tweedie.

Nat. Sc., James Adamson, William Lewis Martin, John Myles, Andrew Robertson Wilson.

1891.

Class. ii., John Adam Norrie, William Gibson Wedderspoon.

Phil. i., Henry Barker, John Davidson, Walter Charles Murray.

Phil. ii., Alexander Grieve, Wm. Allan Neilson, Alexander Joseph Pearse.

Math. i., John Forbes, Adam Mitchell Hunter, William Edward Philip, William Leslie Thomson, John Turner.

Nat. Sc., Robert Pollok, James Rodger Watson.

1892.

Class. ii., Peter Campbell, William Gracie, Hugh Ross Mackintosh.

Phil. i., Hugh Ross Mackintosh.

Phil. ii., Thomas Linton, William Joseph Pennell.

Math. i., James Mitchell.

Math. ii., Alexander Campbell Mackay.

Nat. Sc., John Smith Flett.

1893.

Class. i., Robert Gordon McKerron.

Class. ii., Walter Robertson Henderson, Hugh Lugton Jackson, Robert Montgomerie Samson.

Phil. i., Alexander Beith Macaulay, Hugh Pattison Macmillan, Lilias Maitland.

Phil. ii., William John Collier, Sydney Smith, William Finlayson Trotter.

Math. i., Neil Macmichael.

Math. ii., George Lowe Moffat, Frank Spence, Thomas Wilkie Wilson, James Wood.

Nat. Sc., Frank Spence, William White Taylor, William Watson.

DEGREE OF MASTER OF ARTS (ORDINARY EXAMINATION).

1st August 1892.

Alexander Baird.
John Hewetson.
Louis Godfrey Irvine.
James Mitchell.
Frank Robert Taylor Pearson.

27th October.

George David Stewart Sandeman.

26th November.

Charles Emilius Lowther Cowan.

13th April 1893.

Douie, Mary Buchan
Fairley, Grace (*in absentia*)
Nairn, Margaret
Newbigin, Maude Elizabeth
5 Philip, Flora
Simson, Frances Helen
Stirling, Amelia Hutchison
Adamson, James
Beattie, James
10 Beilby, Eric Möller
Berry, William
Blair, James
Blair, William
Cairns, George Frederick
15 Colvin, James Charles Gillies
Crichton, David Sprunt
Drever, James
Duffus, John Webster
Folkarde, William Gray
20 Fraser, Thomas
Gifford, John
Goodwin, Albert Edwin
Gray, Alexander Hunter
Gray, Charles Alexander
25 Hart, George
Harvey, William Frederick
Henderson, George
Henderson, John
Henderson, John Hossell
30 Innes, Alexander Fraser
Kinghorn, Hugh John Cuthbertson
Kyd, John Butchart
Lay, Alexander Frank
Lees, Robert
35 M'Dougall, George
M'Kenzie, Kenneth John
Maclennan, Alexander
Mackinnon, Albert Glenthorn
Main, Robert
40 Martin, William Paulin
Melville, Robert Dundonald
Milroy, John Alexander
Pickles, Frederick
Pullar, Henry William
45 Ritchie, William Dickson
Robertson, George Henry Whiteside
Robertson, John M'Callum
Robertson, Stewart Alan
Robertson, Stuart
50 Rogerson, Edwin
Rogerson, John
Ross, John Keith
Smith, Algernon John Durham
Somerville, Alexander
55 Sutherland, John
Tolmie, James
Urquhart, Duncan

Walker, Francis Richard Sandford
Walker, William
60 Wallace, James
Watt, John Lauchlan MacLean
Welsh, John
Williamson, Alexander
Wilson, John Bruce
65 Wilson, William Carlyle
Wood, James

REGULATIONS FOR SCHOOLMASTER'S DIPLOMA.

1. Candidates for the Schoolmaster's Diploma must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

2. Each Candidate must have matriculated in the University for the year in which he presents himself for the Diploma.

3. Each Candidate must have attended the Class of the Theory, Art, and History of Education in the University.

4. Each Candidate must pass an Examination in the Theory, Art, and History of Education, to be conducted by the Professor of that subject, and an Examiner appointed by the University Court.

5. The subjects of Examination are announced annually in the *University Calendar.*

6. Each Candidate must give evidence either :—
    (*a.*) That he has attended a Course of Practical Instruction in a Training College for Teachers ; *or*
    (*b.*) That he has gone through a complete course of Practical training in a Training College or Normal School for Teachers—the Course to extend over not less than five months, and to include Demonstration and Criticism Lessons.

7. Each Candidate must further satisfy the University of his practical aptitude as a Teacher by teaching a class in some special Subject or Subjects in which he has received instruction in the University, or in any Institution recognised by the University as qualifying for Degrees.

8. Each successful Candidate will receive a Diploma signed by the Vice-Chancellor of the University, or, in his absence, by the Principal or the Senior Professor. The Diploma will be delivered at a public meeting for conferring Degrees.

9. This Diploma is of two grades : (*a*) for Masters of Arts with Honours in any Department, testifying to their fitness for Secondary Schoolmasterships, and will state the Special Subjects in which the holder of the Diploma is qualified ; (*b*) for those who have taken the ordinary Degree of M.A.

10. The Fee for the Diploma is £2, 2s.

The next Examination will take place on Friday, 30th March 1894, at 9 and 11.30 o'clock a.m., and Candidates are required to enter their names and pay the Fee at the *Matriculation Office* on or before 16th March.

The subjects are the same as for Graduation (which see), *with the addition* of Milton's "Tractate"; Quintilian's "Institutions," Books I. and II.; and "The History of Education, Ancient and Modern," down to 1688.

A short Thesis will be prescribed to be written in the Examination Room on an Educational subject.

The Diploma has been conferred on the following Candidates :—

A.—GENERAL DIPLOMA AND DIPLOMA FOR SECONDARY SCHOOLS.

1890—Robert Stewart M'Dougall.
1891—Wm. Brereton Dennison, M.A.; Wm. Allan Neilson, M.A.
1892—John Edgar, B.A. (Oxon.)
1893—Arthur Wynne Shaw, B.A. (Yale); Albert Zoutmann, M.A. (Edin.).

B.—GENERAL DIPLOMA.

1888—D. Bogie, M.A.; J. S. Lawson, M.A.; C. H. Owen, M.A.
1889—Donald Brims, M.A.; Charles Smith, M.A.
1891—E. W. Hobbs, M.A.; D. M'Gregor, M.A.; E. Mitchell, M.A.
1892—Frederick Samuel Davies, B.A. (Lond.); John Brown Hamilton, M.A., B.D. (Glasg.); Thomas Miller Henry, M.A. (Edin.); James Livingston Linton, M.A. (Edin.); Edward Wilson, M.A. (Edin.).

REGULATIONS FOR CERTIFICATE OF "LITERATE IN ARTS." (L.A.)

The following are the Regulations for this Certificate :—

1. The Certificate is open to persons who have passed the Preliminary Examination, and who have subsequently attended for two Winter or one Winter and two Summer Sessions the usual qualifying courses of instruction in the Faculty of Arts in subjects in which they wish to qualify.

2. The number of subjects of examination shall be four, and the standard of examination shall be the Graduation standard.

3. Of the subjects selected, two shall be from two of the groups mentioned in Section VII. (2) of the Arts Ordinance, and the others may be any two mentioned in the Arts Ordinance,[1]

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[1] See Time-Table of Examinations, pages 124 and 125.

with the addition of Music and Agriculture (the latter including a practical examination).

4. The fee for the Certificate of Literate in Arts is two guineas, or ten shillings and sixpence for each subject.

5. Candidates must be matriculated Students for the year in which they appear for examination.

The next Examination on Music will take place on 31st March 1894 at 1.30 and 2.30 o'clock, and in Agriculture in March 1894, at the same time as the Examination in that subject for the Degree of B.Sc.

Candidates who select Music as a subject will be examined on the Elements of Music (Notation, Measure, Scales, Modes, *Temps*, Forms, &c.); the Class Lectures, and the Professor's "Dictionary of Musical Terms, to which is prefaced an Introduction to the Elements of Music."

Harmony, its Theory and Practice; the Class Lectures, and Richter's "Treatise on Harmony."

History of Music, more particularly from Handel and Bach to the present time; the Class Lectures, Rockstro's "A General History of Music," and Riemann's "Catechism of Musical History" (Part II.: "History of Musical Forms").

Candidates who select Agriculture and Rural Economy will be examined on the Lectures of the Professor and the Saturday field excursions; Practical Laboratory work, to the extent involved by the use of the Laboratory Guide, "The Food of Plants," by A. P. Laurie, M.A., published by Macmillan & Co.; Wallace's "Farm Live Stock of Great Britain," 1893 edition—Crosby, Lockwood & Son; Fream's "Soils and their Properties"—Bell.

The names of Candidates must be given in, Certificates shown, and Fees paid for the Examinations in Autumn 1893, not later than 3rd October, and in Spring 1894 not later than 16th March.

The Certificate was conferred on the following Candidates in 1892-93:—

Alexander Pert.
Henry Hogg.
Frank Ross Mackenzie.

Competitive Examinations for Bursaries in Arts.

HONOUR LIST.

October 1892.

The following Candidates, entitled to distinction, are arranged in the Order of Merit :—

I.—STUDENTS ENTERING FIRST SESSION.

(*Subjects of Examination*—Latin, Greek, Mathematics, and English.)

1. John S. Begg, George Watson's College.
2. D. A. Macnaughton, George Watson's College.
3. Arthur Harcus Firth, Daniel Stewart's College.
4. Alexander M'Gregor, George Watson's College.
5. Frank Young, George Watson's College.
6. William David Ross, Royal High School, Edinburgh.
   Equal.
7. Marshall N. G. Gray, George Watson's College.
8. David Nichol Smith, George Watson's College.
9. C. C. Watson, George Watson's College.
10. W. Eggeling, George Watson's College.
    Equal.
11. William D. Falconer, Dollar Institution.
12. David William Inglis, Daniel Stewart's College.
13. R. W. Mackenna, Royal High School, Edinburgh.
14. N. G. Lindsay, Ayr Academy.
    Equal.
15. W. C. Morton, Queen's Royal, Trinidad.
16. G. MacLennan, George Watson's College.
    Equal.
17. Stewart Edmund Pears, Heidelberg College, Baden.
18. Robert Gray, George Watson's College.
19. G. D. Shepherd, George Watson's College.
    Equal.
20. J. MacLagan Macalister, Daniel Stewart's College.
21. Robert Morison Rowe, George Watson's College.
22. J. Carr Lees, Kelvinside Academy, Glasgow.
23. James M. L. Brown, Ayr Academy
24. A. Maclennan Gordon, Halifax Academy, N.S.
25. Marcus Dods, The Leys, Cambridge.
26. John Chalmers, Daniel Stewart's College.
    Equal.
27. William H. Sellar, George Watson's College.
28. Henry Gamble, George Watson's College.
    Equal.
29. Edward Rowland Jones, Dumfries Academy.
30. Campbell Brown, Daniel Stewart's College.
31. W. S. Simpson, Royal High School, Edinburgh.
32. J. M. Campbell, Montrose Academy.
    Equal.
33. William Hogg Prentice, George Watson's College.
34. Duncan Alex. M'Dougall, George Watson's College.
35. John W. Falconer, Edinburgh Academy.
36. John A. M'Ilvride, George Watson's College.

GEORGE HERIOT BURSARIES.

(*Subjects*—1. Latin; 2. Elementary Mathematics; 3. English, and any two of the following:—4. Greek; 5. French and German; or 6. Higher Mathematics. Candidate must reach the Pass Standard in two of 1, 2, and 3.)

1. Alexander M'Gregor, George Watson's College.
1. David N. Smith, George Watson's College.
3. W. D. Falconer, Dollar Institution. } Equal.
4. David W. Inglis, Daniel Stewart's College. } Equal.
5. R. W. M'Kenna, Royal High School, Edinburgh.
6. R. M. Rowe, George Watson's College.
7. Campbell Brown, Daniel Stewart's College.
8. John M. Campbell, Montrose Academy.

HERIOT UNIVERSITY BURSARIES FOR WOMEN.

(*Subjects of Examination*—1. Latin; 2. Elementary Mathematics; 3. English; any two of the following:—4. Greek; 5. French; 6. German; 7. Higher Mathematics. Candidate must reach the Pass Standard in two of 1, 2, and 3.)

Sarah W. Davison.
Elizabeth W. Garrett.
Ethelwyn L. Lemon.
Mary S. M. Bell.
Margaret L. Thomson.
Isa W. Matthew.

II.—STUDENTS ENTERING SECOND SESSION.

(*Subjects*—Latin, Greek, and Mathematics.)

William John Keith.
Alexander Croom Paterson.
D. B. Waters.
Edward E. Braine.
John D. Comrie.

III.—STUDENTS ENTERING THIRD SESSION.

(*Subjects*—Classics, Mathematics, and Logic, with Psychology.)

John Alexander Johnston.

Class Prize Lists.

FACULTY OF ARTS.

WINTER SESSION, 1892-93.

LATIN.

HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. G. Liddell, Edinburgh (*Medallist*); 2. A. C. Paterson, Edinburgh; 3. C. S. Edgar, Ayr.

SECOND-CLASS CERTIFICATES OF MERIT.—4. R. L. Ross, Edinburgh; 5. G. A. Davidson, Edinburgh.

COMPOSITION PRIZES.—1. C. S. Edgar, Ayr; 2. A. C. Paterson, Edinburgh.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. D. A. Macnaughton, Perthshire; 2. W. D. Ross, Caithness; 3. C. C. Watson, Edinburgh (*Medallists*); 4. H. Wheeler Robinson, Northampton; 5. W. W. Smith, Dumfries; 6. Alex. Macgregor, Dumfries; 7. Henry Herd, Leith; 8. Alex. Easson, Dunfermline; 9. Andrew Hunter, Edinburgh, and D. W. Inglis, Northumberland—equal.

SECOND-CLASS CERTIFICATES OF MERIT.—11. C. S. Findlay, Thurso; 12. Frank Young, Kirkcaldy; 13. William Walker, Edinburgh; 14. D. N. Smith, Edinburgh; 15. D. M. Aitken, Dalkeith; 16. G. D. Shepherd, Uphall; 17. W. C. Morton, Trinidad; 18. Ethelwyn L. Lemon, Northumberland; 19. William Berry, Edinburgh; 20. E. A. Braine, Dundee; 21. J. M. M'Millan, Edinburgh; 22. Robert Gray, Edinburgh; 23. Marshall Gray, Edinburgh; 24. A. M. Gordon, Halifax, Nova Scotia; 25. J. Carr Lees, Edinburgh, and R. W. Mackenna, Dumfries—equal; 27. George Maclennan, Ross; 28. J. P. Murdoch, Dalkeith; 29. E. Henderson, Dundee; 30. Margaret Nairn, Edinburgh; 31. Jas. Blair, Edinburgh; 32. John Ewart, Dalbeattie; 33. Marcus Dods, Edinburgh; 34. R. M. Rowe, Edinburgh; 35. John Chalmers, Bathgate; 36. Alex. Yeoman, Lincolnshire; 37. Mabel Smith, Edinburgh; 38. J. C. Cuthbert, Dundee; 39. John Hyde, Roslin; 40. William Eggeling, Edinburgh; 41. William Anderson, Kirkcaldy; 42. A. H. Firth, Edinburgh; 43. J. G. Burns, Larkhall; 44. W. H. Hamilton, Kirknewton; 45. Donald Martin, Crieff.

LATIN PROSE COMPOSITION.

PRIZES.—1. D. A. Macnaughton, Perthshire, and W. D. Ross, Caithness—equal; 3. George Maclennan, Ross.

HONOURABLE MENTION.—4. Alex. Macgregor, Dumfries; 5. Marshall Gray, Edinburgh; 6. Marcus Dods, Edinburgh, and A. H. Firth, Edinburgh—equal; 8. Edward Henderson, Dundee; 9. Robert Gray, Edinburgh; 10. D. W. Inglis, Northumberland; 11. W. C. Morton, Trinidad; 12. Margaret Nairn, Edinburgh, and William Walker, Edinburgh—equal.

HISTORY.

PRIZES.—1. Andrew Hunter, Edinburgh; 2. Henry Herd, Leith.

HONOURABLE MENTION.—D. Nichol Smith, Edinburgh; William Walker, Edinburgh; C. C. Watson, Edinburgh; and Frank Young, Kirkcaldy—equal.

JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Thomas A. Robertson, Edinburgh; 2. David Reid, Wick (*Medallists*); 3.

G. Dundas Craig, Dundee; 4. James C. Leighton, Dundee; 5. John M'Lean, Forres, and Alfred S. Whytock, Dundee—equal; 7. Alexander R. Johnston, Forfar; 8. T. Cossar Alexander, Forfar; 9. John Meiklejohn, Thurso.

SECOND-CLASS CERTIFICATES OF MERIT.—10. William Sturrock, Dundee; 11. Duncan D. Cameron, Alness, Ross-shire; 12. William Maxwell, Arbroath; 13. Elizabeth W. Garrett, East Lothian; 14. John L. MacLeod, Inverness-shire; 15. David R. Armit, Arbroath; 16. William C. B. Munro, Thurso; 17. James W. Purves, Edinburgh, and Robert Young, Mid-Lothian—equal; 19. Henry Wilkie, Lochgelly; 20. John Bell, Langholm; 21. George C. Rankin, Edinburgh; 22. Charles F. Noble, Inverness; 23. Alexander Hume, Caithness; 24. David Sutherland, Caithness; 25. Thomas A. Fraser, Leith; 26. John C. Ewing, Forfar; 27. Charles R. Lowdon, Kirriemuir; 28. John M. Campbell, Montrose; 29. William Guthrie, Leven; 30. Alfred Shearer, Orkney; 31. William M. Low, Leith, and James G. Wallace, Arbroath—equal; 33. Thomas Mercer, Kelso; 34. Thomas J. Burnett, Loanhead; 35. Donald Lamont, Tiree; 36. Thomas S. Welsh, Mid-Lothian; 37. John Slight, Mid-Lothian; 38. James Mackie, Perthshire.

PRIZES FOR LATIN PROSE COMPOSITION.—1. Thomas A. Robertson, Edinburgh; 2. Alfred S. Whytock, Dundee.

HONOURABLE MENTION.—3. G. Dundas Craig, Dundee; 4. James C. Leighton, Dundee; 5. David Reid, Wick; 6. William Maxwell, Arbroath; 7. Alexander R. Johnston, Forfar; 8. John L. MacLeod, Inverness-shire; 9. Alexander Hume, Caithness, and John Meiklejohn, Thurso — equal; 11. John M'Lean, Forres; 12. Elizabeth W. Garrett, East Lothian; 13. Henry Wilkie, Lochgelly; 14. Duncan D. Cameron, Alness.

PRIZE FOR ROMAN HISTORY.—1. James C. Leighton, Dundee.

HONOURABLE MENTION.—2. John M'Lean, Forres; 3. Thomas A. Fraser, Leith, and Alfred S. Whytock, Dundee—equal; 5. Alex. R. Johnston, Forfar, and William Sturrock, Dundee—equal.

H. C. GOODHART, M.A., *Professor.*

GREEK.

THIRD CLASS.

PRIZES.—1. A. C. Paterson, Edinburgh (*Medallist*); 2. W. W. M'Kechnie, Edinburgh; 3. Beatrice T. Mills, Edinburgh.

CERTIFICATES OF MERIT.—4. C. S. Edgar, Ayr; 5. Alexander B. Macdonald, Cumnock; 6. Francis Dewar, Edinburgh; 7. W. J. Keith, Portobello; 8. R. L. Ross, Edinburgh.

COMPOSITION PRIZE.—C. S. Edgar.

HISTORY PRIZE.—A. C. Paterson.

SENIOR CLASS.

PRIZES.—1. James M. Moore, Lauder (*Medallist*); 2. Wm. D. Ross, Thurso; 3. D. A. Macnaughton, Kenmore; 4. Wm. C. Morton, Trinidad; 5. E. A. Braine, Edinburgh; 6. C. C. Watson, Edinburgh; 7. Marshall N. G. Gray, Edinburgh; 8. Alex. M'Gregor, Dumfries; Frank Young, Kirkcaldy; and D. W. Inglis, Northumberland—equal.

CERTIFICATES OF MERIT.—11. George M'Lennan, Ross-shire; 12. George Ednie, Edinburgh; 13. Marcus Dods, Edinburgh; 14. Alexander Easson, Dunfermline, and W. W. Smith, Dumfriesshire—equal; 16. Wm. Anderson, Dysart, and J. Melrose Macmillan, Edinburgh—equal; 18. D. Nichol Smith, Edinburgh; 19. Robert Gray, Edinburgh; 20. C. S. Findlay, Thurso; 21. D. M. Aitken, Dalkeith; 22. H. W. Robinson, Northampton; 23. George D. Shepherd, Ecclesmachen; 24. A. R. Yeoman, Lincolnshire; Wm. Eggeling, Edinburgh; Robert M. Rowe, Edinburgh; and W. S. Simpson, Fife—equal; 28. Robert Burness, Edinburgh.

COMPOSITION PRIZE.—James M. Moore.

HISTORY (GENERAL).—1. James M. Moore (*Prize.*) *Honourable Mention.*—2. E. A. Braine; 3. Wm. Anderson; 4. W. W. Smith.

HISTORY (SPECIAL SUBJECT).—1. James M. Moore (*Prize.*) *Honourable Mention.*—2. W. D. Ross and Frank Young—equal; 4. D. W. Inglis and C. C. Watson—equal.

JUNIOR CLASS.

PRIZES.—1. Maude E. Newbigin, Alnwick, and Thomas A. Robertson, Edinburgh—equal; (*Medallists*); 3. Alexander R. Johnston, Forfar; 4. Colin S. M. Brown, Shetland; 5. Charles T. Macgregor, Mid-Lothian; 6. David Reid, Wick; 7. John M'Lean, Forres; 8. John B. Meiklejohn; Thurso.

CERTIFICATES OF MERIT.—9. Alfred S. Whytock, Dundee; 10. William Maxwell, Arbroath; 11. William C. B. Munro, Thurso; 12. Robert H. Fernie, Edinburgh, and David Sutherland, Caithness—equal; 14. John M. Campbell, Montrose; 15. Donald Lamont, Argyllshire; 16. Alexander Hume, Caithness; 17. William M. Low, Edinburgh; 18. George C. Rankin, Edinburgh.

COMPOSITION PRIZES.—1. Thomas A. Robertson; 2. Maude E. Newbigin.

HISTORY PRIZE.—Peter Anderson, Dundee. *Honourable Mention*—J. W. Lowthian and David Reid—equal.

LITERATURE PRIZE.—John M'Lean. *Honourable Mention.*—J. W. Lowthian and David Reid—equal.

GRAMMAR PRIZE.—A. R. Johnston and David Reid—equal.

The subject for private readings for the Winter Session 1893-94 will be the "Bacchæ" of Euripides by Tyrrell (Macmillan.)

S. H. BUTCHER, D.LITT., LL.D., *Professor.*

ENGLISH.

I.—CLASS PRIZES AND CERTIFICATES OF DISTINCTION.

PRIZES.—1. Thomas Hart, Edinburgh; 2. Thomas Pullar, Perth (*Medallists*); 3. J. Hossell Henderson, Glasgow; 4. John Stevenson, China; 5. Jas. F. Ross, Montrose; 6. Walter R. Henderson, Edinburgh; 7. Wm. Mackenzie, Cromarty; 8. Charles A. Macpherson, Melrose; 9. Miss Margaret Heath, London; 10. J. M. Nisbet, Berwickshire; 11. H. A. Braine, Yorkshire; 12. Robert J. Dick, Dunbar; 13. J. B. Baillie, Forfarshire; 14. John Rose, Nairn; 15. Alex. B. Macdonald, Cumnock; 16. Miss J. Robertson, Edinburgh; 17. James H. Hargreaves, Lancashire; 18. John F. Cameron, Perthshire; 19. Jas. Beattie, Roxburghshire.

CERTIFICATES OF DISTINCTION.—20. Geo. R. T. Ross, Arbroath; 21. John Henderson, Roxburghshire; 22. Miss Wilhelmina M. Kerr, Sanquhar; 23. John M. Robertson, Linlithgowshire, and Stuart Robertson, London—equal; 25. Alex. MacLennan, Ross-shire, and Jas. B. Penman, Stranraer—equal; 27. Andrew Tweedie, Swinton; 28. H. M. Willsher, London; 29. Miss A. Hume Bryden, Moffat; Miss Janette M. Mair, Edinburgh; and Andrew Mitchell, Lanarkshire—equal; 32. Miss Helen Robertson, Edinburgh; 33. Geo. M'Dougall, Dumfriesshire, and Henry F. Sim, Braemar—equal; 35. George Hart, Ayr, and Miss M. MacKail, Edinburgh—equal; 37. G. Dundas Craig, Dundee; 38. Hugh M'Calman, Edinburgh; 39. Jas. M. Moore, Lauder; 40. Reginald J. F. Johnston, Edinburgh, Alex. Welsh, Edinburgh, and Chas. A. Wood, Yorkshire—equal; 43. James Adamson, Forfar.

II.—ESSAY PRIZES AND CERTIFICATES OF DISTINCTION.

PRIZES.—1. Miss Lilias A. Johnstone, Edinburgh, and Alexander Welsh, Edinburgh—equal (*Medallists*); 3. Miss Margaret Heath, London; 4. Walter R. Henderson, Edinburgh; 5. Thomas Hart, Edinburgh, and A. Duncan Smith, Dundee—equal; 7. Miss Agnes H. Millidge, Edinburgh; 8. Reginald J. F. Johnston, Edinburgh; 9. Jas. H. Hargreaves, Lancashire, and J. Hossell Henderson, Glasgow—equal; 11. Andrew Mitchell, Lanarkshire, and John Stevenson, China—equal.

CERTIFICATES OF DISTINCTION.—13. George Hart, Ayr; 14. Hugh M'Calman, Edinburgh; 15. W. A. Miller, India; 16. Lennox Fraser, Elgin, and Jas. H. Moore, Lauder—equal; 18. W. G. Boag, Stirlingshire; 19. Saville Middlemass, Edinburgh, and James B. Penman, Stranraer—equal; 21. Thomas Pullar, Perth; 22. Miss A. Hume Bryden, Moffat; 23. A. C. Cameron, Lanarkshire; W. H. Harvey, India; and Chas. A. Wood, Yorkshire—equal.

III.—WORK IN OLD AND MIDDLE ENGLISH.

PRIZE.—Thomas Pullar, Perth.

IV.—POETICAL COMPOSITION.

PRIZES.—1. Alexander Welsh, Edinburgh; 2. R. J. F. Johnston, Edinburgh.

HONOURABLE MENTION.—Lennox Fraser, Elgin.

DAVID MASSON, LL.D., *Professor.*

SANSKRIT.

1. Charles S. Edgar, Class Medal and First Muir Prize.
2. William Eggeling, Second Muir Prize.

J. EGGELING, Ph.D., *Professor.*

CELTIC LANGUAGES AND LITERATURE.

I.—CELTIC CLASS.

PRIZES AND CERTIFICATES.—1. Donald MacInnes, M.A., Portree (*Medallist*); 2. Neil Macleod, Strathy; 3. Archibald Macleod, South Uist. *Certificate of Merit.*—Dugald Macfarlane, Tiree.

II.—GAELIC CLASS.

PRIZES AND CERTIFICATES.—1. Donald Lamont, Tiree (*Medallist*); 2. Charles D. M'Intosh, M.A., Logierait; 3. Ella C. Carmichael, Edinburgh; 4. J. D. Macdonald, Stoer.

SPECIAL PRIZES.—£10, 10s. given by the Highland Society of London—Donald MacInnes, M.A., Portree. £5, 5s. given by the Perthshire Association—Neil Mackay, M.A., Strathy. Book Prizes given by John Mackay, Esq., Hereford.—Celtic Class—Donald MacInnes, M.A.; Gaelic Class—1. Donald Lamont; 2. Ella C. Carmichael.

DON. MACKINNON, M.A., *Professor.*

LOGIC AND METAPHYSICS.

ADVANCED CLASS.

PRIZES.—1. (*Bruce of Grangehill and Falkland Prize*)—Hugh P. Macmillan, Greenock (*Medallist*); 2. William J. Collier, Lerwick, Lilias Maitland, Edinburgh, and Sydney Smith, Edinburgh—equal.

ORDINARY CLASS.

PRIZES.—1. James Paterson, Edinburgh; 2. John Macaskill, Dingwall; 3. James A. Macdonald, Leith (*Medallists*); 4. William J. Stuart, Edinburgh; 5. Jessie Muir, Edinburgh; 6. Peter M'Gregor, Perth, and William W. M'Kechnie, Edinburgh—equal; 8. William Mackenzie, Cromatry; 9. Donald G. Ross, Travancore ; 10. Elizabeth W. Garrett, Prestonkirk ; Alexander B. Macdonald, Cumnock ; and William M'Clymont, Edinburgh—equal ; 13. Frances H. Melville, Edinburgh ; 14. Francis Dewar, Edinburgh ; 15. Jeanie K. Borland, Edinburgh ; 16. Robert C. M. Bell, Edinburgh, and James B. Russell, Greenock—equal.

CERTIFICATES OF MERIT.—18. Andrew Mitchell, Douglas ; 19. Alexander M. Gordon, Halifax, N.S.; 20. Arthur J. Gossip, Edinburgh ; Harry M'D. Ross, Inverness ; and Robert H. K. Clark, St Andrews—equal ; 23. Hugh Mitchell, Campbelton ; 24. George A. Davidson, Edinburgh ; Margaret R. Heath, London ; James Wallace, Davidson's Mains ; and James P. M'Owan, Dunblane—equal ; 28. James P. Alexander, Leslie ; 29. James Y. Simpson, Edinburgh ; Maud A. Murray, Edinburgh ; and Andrew Young, Perth—equal ; 32. John Rose, Nairn, and Charles Robertson, Roxburghshire — equal ; 34. Thomas Hart, Edinburgh, and Frederick A. Barnardo, Isle of Wight—equal ; 36. Duncan M. Burden, Dundee ; James Craig, Cramond ; George A. Russell, Dundee ; and Donald B. Waters, Wick—equal ; 40. Robert D. Melville, Edinburgh, and Charles S. Edgar, Edinburgh—equal,

ANDREW SETH, LL.D., *Professor.*

MORAL PHILOSOPHY.

ADVANCED CLASS.

FIRST-CLASS CERTIFICATES.—1. Hugh P. Macmillan, Geeenock ; 2. Sydney Smith, Edinburgh ; 3. Lilias Maitland, Edinburgh (*Medallists*) ; 4. William J. Collier, New Deer.

SECOND-CLASS CERTIFICATES.—John E. Pickles, Yorkshire.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. James B. Baillie, East Lothian ; 2. James MacKenna, Dumfries ; 3. John Macaskill, Dingwall (*Medallists*) ; 4. Thomas Pullar, Perth ; 5. Hugh Gunn, Sutherlandshire ; 6. James F. Ross, Montrose ; 7. John F. Cameron, Perthshire ; 8. James Beattie, Roxburghshire ; 9. James A. Macdonald, Leith ; 10. Alexander Bain, Lauder ; 11. Hugh M'Calman, Edinburgh ; 12. Alexander Maclennan, Fortrose.

FIRST-CLASS CERTIFICATES.—13. James Blair, Edinburgh ; 14 James Paterson, Edinburgh ; 15. P. S. Hardie, Edinburgh, and M. Louisa Thomson, Edinburgh—equal ; 17. G. M'Dougall, Dumfriesshire ; 18. Andrew Paterson, Ayrshire ; 19. W. R. Henderson, Edinburgh ; 20. J. H. Henderson, Edinburgh ; 21. R. D. Melville, Edinburgh ; 22. A. J. Gossip, Edinburgh ; 23. A. M. Welsh, Edinburgh ; 24. James Adamson, Forfar ; W. F. Harvey, Travancore ; and J. B. Penman, Stranraer—equal ; 27. John Henderson, Roxburghshire ; 28. J. Cameron, Fort William ; 29. E. Fraser, Inverness-shire ; J. Welsh, East Wemyss ; and G. Hart, Ayrshire—equal.

Second-class Certificates.—32. W. Swanney; 33. James Y. Simpson and D. W. Baird—equal; 35. J. M. Robertson; 36. T. Duncan; 37. D. Murray; 38. J. W. Duffus; 39. A. Tweedie; 40. J. C. Fairbairn and G. G. M'Arthur—equal; 42. A. J. D. Smith; 43. S. Middlemass.

EXAMINATION ON KANT'S ETHICS.

Prizes.—1. J. B. Baillie, East Lothian; 2. A. MacLennan, Fortrose; 3. T. Pullar, Perth.

Honours. — 4. J. F. Cameron, Perthshire, and J. MacKenna, Dumfries—equal.

H. CALDERWOOD, LL.D., *Professor.*

POLITICAL ECONOMY.

Prizes and First-Class Honours Certificates.—1. R. C. V. Carey, Edinburgh (*Medal and Merchant Company's Prize of* £10, 10s.); 2. C. S. Pennell, Fifeshire (*George Watson's Prize*); 3. J. Robbie, Portobello (*Daniel Stewart's Prize*); 4. A. M'Callum, Edinburgh; 5. E. M. Beilby, Edinburgh, and D. Mekie, Edinburgh—equal; 7. W. P. Neill, Edinburgh.

Essays.—1. J. Robbie (*Prize*); 2. C. S. Pennell (*Prize*); 3. A. M'Callum; 4. Chinsei Inouye; D. Mekie; and W. P. Neill—equal; 7. S. S. Adam.

Second-Class Certificates.—S. S. Adam; Chinsei Inouye; J. Laing; C. Marshall Smith; R. F. Stevenson.

ECONOMICS FOR AGRICULTURAL STUDENTS.

First-Class Honours.—1. J. W. Paterson (*Medal and Prize*); 2. W. Adamson (*Prize*); 3. R. Affleck and A. Goodfellow—equal.

J. SHIELD NICHOLSON, D.Sc., *Professor.*

EDUCATION (THEORY, HISTORY, AND ART OF).

Medal and First-Class Certificate.—Henry Barker, M.A.

First-Class Certificates.—Dora T. Atkinson, Jeanie K. Borland, Margaret A. Clapperton, Wilhelmina G. Cumming, James C. Cuthbert, Alexander Doull, John Fairbairn, William Fowler, Agnes R. Grieve, Agnes M. Gumley, Samuel Gray, Lavinia M. Hardy, James R. Maxwell, David W. Morris, David Nelson, Charles Robertson, Elizabeth C. Robertson, A. Wynne Shaw, M.A.; John Stevenson, M.A.; Marion Wilkie, H. M. Willsher, Andrew Young, Albert Zoutmann, M.A.

S. S. LAURIE, LL.D., *Professor.*

MATHEMATICS.

ADVANCED HONOURS.

Prize, Medal, and First-Class Certificate.—J. A. Johnston, Edinburgh.

First-Class Certificates.—A. G. Burgess, Wishaw; H. Herd, Leith; R. G. M'Kerron, Edinburgh; G. L. Moffat, Edinburgh; W. G. Napier, Edinburgh; W. Smith, Cramond; T. W. Wilson, Perth; J. Wood, Edinburgh.

INTERMEDIATE HONOURS.

First-Class Certificates.—G. T. Davison, Newcastle; T. W. Pickles, York.

Second-Class Certificates.—W. R. Aikman, Edinburgh; A. D. Russell, Edinburgh; H. Walker, Edinburgh.

SENIOR CLASS.

Prizes and First-Class Certificates.—1. J. S. Begg, Edinburgh; 2. A. C. Smith, Dumfries; 3. W. J. Keith, Joppa (*Medallists*); 4. W. Jeffrey, Newcastle, and Miss J. C. Macmillan, Edinburgh—equal; 6. F. A. Barnardo, Bournemouth; 7. S. Milligan, Dumfries; 8. H. Mitchell, Argyll; 9. Miss M. Drummond, Edinburgh; 10. R. C. M. Bell, Edinburgh; 11. F. G. Smith, Edinburgh; 12. P. M'Gregor, Perth; 13. W. Thomson, Edinburgh; 14. H. D. Boissière, Trinidad; E. W. Franks, Yorkshire; and A. C. Paterson, Edinburgh—equal.

Second-Class Certificates.—A. Bain, Lauder; J. Clark, Perth; D. Connel, Burntisland; J. A. Craig, Edinburgh; Miss S. W. Davison, Newcastle; Miss C. J. Drummond, Edinburgh; E. F. Gibson, Edinburgh; A. L. Graham, Greenock; R. Mackenzie, Bonar Bridge; J. B. M'Owan, Dunblane; C. S. Pennell, Fife; Miss Jessie A. Robertson, Edinburgh; Miss Jeannie W. Robertson, Edinburgh; H. M'D. Ross, Inverness; A. R. Scott, Edinburgh; H. D. Sprague, Edinburgh; W. J. Stuart, Edinburgh; D. J. Tweedie, Bo'ness; D. B. Waters, Wick.

JUNIOR CLASS.

Prizes and First-Class Certificates.—1. J. C Leighton, Dundee; 2. W. Eggeling, Edinburgh; 3. W. Darling, Edinburgh (*Medallists*); 4. L. O. Critchley, Inverness; 5, J. M. Moore, Lauder; 6. A. H. Firth, Edinburgh; 7. J. D. Easson, Edinburgh; 8. A. Easson, Dunfermline; 9. C. S. Findlay, Thurso; J. M. M'Alister, Edinburgh; and W. Smith, Edinburgh—equal; 12. F. Young, Kirkcaldy.

Second-Class Certificates.—J. Craig, Cramond; G. N. Dods, Edinburgh; J. Ednie, Edinburgh; W. D. Falconer, Tillicoultry; A. R. Foggie, Dundee; W. Fowler, Hawick; W. J. Haig, Dollar; M. Laidlaw, Edinburgh; J. S. M'Inroy, Dundee; F. R. Mackenzie, Edinburgh; K. J. Mackenzie, Edinburgh; W. Maclusky, Hamilton; D. Nelson, Edinburgh; H. F. Rankin, Fort-William; M. Ritchie, Edinburgh; G. Robertson, Edinburgh; G. P. Walker, Edinburgh; C. C. Watson, Edinburgh; C. A. Wood, York; A. Young, Perth; J. Yuill, Kirriemuir.

The NEWTON BURSARY in the Class of Senior Mathematics has been awarded to William Jeffrey.

G. CHRYSTAL, LL.D., *Professor.*

NATURAL PHILOSOPHY.

ADVANCED CLASS.

CERTIFICATES OF HONOUR.—1. J. A. Johnston, Edinburgh (*Medallist*); 2. A. G. Burgess, Lanark; G. L. Moffat, Edinburgh; and T. W. Wilson, Perthshire,—equal.

ORDINARY CLASS.

HIGHER DIVISION—MEDAL, PRIZE, AND CERTIFICATE OF HONOUR. —Miss Macmillan, Edinburgh.

LOWER DIVISION—PRIZES AND CERTIFICATES OF HONOUR.—1. A. C. Smith, Dumfriesshire; 2. Miss Drummond, Edinburgh; 3. W. Thomson, Edinburgh (*Medallists*); 4. F. G. Smith, Edinburgh; 5. W. J. Keith, Joppa, and D. J. Tweedie, Bo'ness—equal; 7. W. Jeffrey, Newcastle-on-Tyne; 8. A. Bain, Berwickshire, and W. J. Stuart, Edinburgh—equal; 10. E. W. Franks, Yorkshire; 11. D. B. Waters, Wick; 12. G. A. Russell, Dundee; 13. Miss Fraser, Edinburgh; 14. Miss Sutherland, Edinburgh; 15. A. Barrett, Edinburgh, and F. Dewar, Edinburgh—equal; 17. Miss Muir, Edinburgh; 18. A. Brown, Galashiels, and A. W. Dick, Edinburgh—equal; 20. Miss Garrett, East Lothian; 21. J. Welsh, Fifeshire; 22. H. D. Sprague, Edinburgh; 23. E. F. Gibson, Edinburgh; 24. G. C. Purvis, Edinburgh; 25. F. Barnardo, Isle of Wight; 26. M. Ritchie, Edinburgh; 27. H. Mitchell, Argyll.

CERTIFICATES OF MERIT.—28. P. M'Gregor, Perth; 29. C. S. Pennell, Edinburgh; 30. T. S. Muir, Selkirk; 31. J. B. M'Owan, Dunblane; 32. D. S. Ross, Glasgow; 33. W. H. Prentice, Edinburgh; 34. D. B. Lawson, Coupar-Angus; 35. R. C. M. Bell, Edinburgh, and J. Inglis, Edinburgh—equal; 37. C. Menmuir, Arbroath; 38. R. J. Dick, Haddingtonshire, and R. M'Kenzie, Bonar Bridge—equal; 40. A. R. Scott, Edinburgh; 41. Miss Nairn, Edinburgh; 42. J. Craig, Cramond, and D. M. Burden, Dundee—equal; 44. Miss Newbigin, Northumberland; 45. W.

Fowler, Hawick ; 46. R. Borthwick, Edinburgh, and R. Whyte, Edinburgh—equal ; 48. D. Mekie, Edinburgh ; 49. R. Gray, Edinburgh, and W. M'Luskie, Hamilton—equal ; 51. D. G. Ross, Travancore ; J. H. Hargreaves, Lancashire ; and D. Connell, Burntisland—equal ; 54. J. S. M'Inroy, Dundee ; 55. A. Gray, Berwickshire, and J. H. Melville, Lochgelly—equal ; 57. J. Yuill, Kirriemuir.

FORTNIGHTLY EXAMINATIONS.—1. A. C. Smith (*Prizeman*) ; 2. Jeffrey ; 3. W. Thomson ; 4. T. S. Muir ; 5. Keith and Waters—equal ; 7. Miss Macmillan ; 8. A. W. Dick, Miss Drummond, F. G. Smith, and W. T. Stewart—equal ; 12. H. Mitchell ; 13. Borthwick, Dewar, Franks, Pennell, and A. R. Scott—equal ; 18. Miss Muir ; 19. Bain and D. S. Ross—equal ; 21. L. Smith and Tweedie—equal.

INTERMEDIATE HONOURS CLASS.

C. G. KNOTT, D.Sc., *Lecturer.*

CERTIFICATES OF HONOUR.—1. W. G. Rennie, Edinburgh (*Medallist*).

CERTIFICATES OF MERIT.—2. G. Scott Dalgleish, Edinburgh, and G. T. Davison, Newcastle-on-Tyne—equal ; 4. A. D. Russell, Edinburgh.

PHYSICAL LABORATORY—SUMMER 1892 or WINTER 1892-3.

The following are highly commended :—A. Barrett, A. G. G. Cumming, W. Fulton, J. Inglis, J. A. Macdonald, W. B. Park, W. G. Rennie, J. K. Ross, D. S. Ross, S. Simpson, A. C. Smith, W. Thomson.

The Neil-Arnott Scholarship is awarded to J. A. Macdonald, and the *Donald Fraser Scholarship* to W. Thomson. The *Newton Bursary* is awarded to A. C. Smith.

P. G. TAIT, M.A., *Professor.*

For Class Prize Lists in CHEMISTRY, ZOOLOGY, and BOTANY, see FACULTY of MEDICINE.

GEOLOGY.

FIRST-CLASS CERTIFICATES.—James Burnet, Edinburgh (*Medallist*) ; William Watson, Kirkcudbright ; Robert M. Clark, Aberdeen ; Robert Godfrey, Edinburgh.

PRACTICAL GEOLOGY.

FIRST-CLASS CERTIFICATES.—Robert M. Clark, Aberdeen (*Medallist*) ; Ma ion S. Newbigin, Edinburgh ; R. Godfrey, Edinburgh ; G. L. Anderson, Edinburgh.

SECOND-CLASS CERTIFICATES. — William Watson, Kirkcudbright ; James Burnet, Edinburgh.

SUMMER SESSION, 1893.

STRUCTURAL AND FIELD GEOLOGY.

FIRST-CLASS CERTIFICATES.—1. Alex. Morgan, Leith (*Medallist*); 2. Robert Affleck, Galloway; 3. John W. Paterson, Peeblesshire; 4. William Adamson, Kirkcudbrightshire; 5. R. W. Pringle, Edinburgh.

SECOND-CLASS CERTIFICATES.—6. Riotoro H. Hunter, Japan; 7. James Burnet, Edinburgh; 8. Arthur Dickson, Montrose; 9. B. lal Chaudhuri, Bengal,

JAMES GEIKIE, D.C.L., LL.D., *Professor.*

HISTORY.

I. EXAMINATIONS.—1. J. Clark Nicol (*1st Prize*); 2. John S. Begg and Shanna Kinnaird Rose—equal (*2nd Prizes*); 4. Helen A. Methven and L. O'Flaherty—equal; 6. Allan G. Gilbert, George A. Harrison, and Agatha Waller-Paton—equal.

II. ESSAYS.—1. John S. Begg (*Essay Prize*); 2. J. Clark Nicol and L. O'Flaherty—equal; 4. A. Waller-Paton and S. Kinnaird Rose—equal.

HONOURABLE MENTION IN EXAMINATIONS AND ESSAYS.—Chinsei Inouye.

JOHN KIRKPATRICK, LL.D., *Professor.*

For Class Prize Lists in CONSTITUTIONAL LAW and HISTORY, ROMAN LAW and PUBLIC LAW, see FACULTY OF LAW.

ARCHAEOLOGY AND ART (HISTORY OF).

CLASS MEDAL.—Henry Barker.

SECOND PRIZE FOR CLASS WORK.—Maud A. Murray and Percy E. Nobbs—equal.

COUSIN PRIZE.—Henry Barker.

G. BALDWIN BROWN, M.A., *Professor.*

ENGINEERING.

FIRST-CLASS CERTIFICATES.—1. W. G. Rennie, W. H. Kerr, and J. S. Ker—equal (*Medals*); 4. G. Scott Dalgleish (*Prize*); 5. A. T. Duguid (*Prize*); 6. A. W. Cockburn (*Prize*); 7. W. Brown; 8. J. W. Paterson.

SECOND-CLASS CERTIFICATES.—9. J. S. H. Chancellor; 10. F. St J. Gebbie.

GEOMETRICAL AND MECHANICAL DRAWING.

FIRST-CLASS CERTIFICATES.—1. W. G. Rennie (*Medal*); 2. G. Scott Dalgleish (*Prize*); 3. W. H. Kerr.

SECOND-CLASS CERTIFICATES.—4. F. St J. Gebbie; J. S. H. Chancellor.

SUMMER SESSION, 1892.

ENGINEERING FIELDWORK.

FIRST-CLASS CERTIFICATES.—1. J. Bayne (*Medallist*); 2. J. S. Ker and J. Wilson—equal; 4. W. H. Kerr; 5. W. Brown; 6. J. B. Melhuish and W. G. Rennie—equal; 8. J. Hutton; 9. J. S. Gammell.

SECOND-CLASS CERTIFICATES.—10. J. S. H. Chancellor and L. Duncan—equal; 12. L. Seheult; W. T. Dilley; 14. E. W. Caddick; 15. R. S. Cunliffe; 16. C. E. Davis.

G. F. ARMSTRONG, M.A., M.Inst. C.E., *Professor.*

AGRICULTURE.

FIRST-CLASS CERTIFICATES.—1. Alexander Goodfellow, Greenlaw (*Medallist*); 2. Robert Affleck, Castle-Douglas; 3. Herbert S. Daine, Liverpool; 4. A. C. Welsh, Earlston; 5. William Semple, Ayr; 6. E. Montague Arnold, Kew; 7. John King, Dumfries; 8. Charles D. M. Ross, M.A., Crieff.

SECOND-CLASS CERTIFICATES.—9. John C. Robertson, Strathpeffer; 10. James Stuart Thomson, Edinburgh; 11. A. Walker Reid, Edinburgh; 12. James Barr, Kilmarnock; 13. Henry C. Stuart, Rothesay; John Dudley Stuart, Rothesay; Joseph Pender, Glasgow; C. P. Webster, Liverpool; and David Tarbet, London—equal.

STEVEN SCHOLARSHIP (value about £75).—Alexander Goodfellow.

HIGHLAND SOCIETY PRIZES.—£4, A. C. Welsh; £3, R. Affleck and H. S. Daine.

ESSAY ON FARM EXCURSIONS.—Alexander Goodfellow and John C. Robertson (*highly commended*).

ROBERT WALLACE, *Professor.*

AGRICULTURAL ENTOMOLOGY.

FIRST-CLASS CERTIFICATES.—1. Alexander Goodfellow (*Medallist*); 2. H. S. Daine; 3. A. C. Welsh; 4. J. A. Simpson; 5. C. D. M. Ross.

SECOND-CLASS CERTIFICATES.—6. J. King; 7. E. N. Arnold; 8. J. Barr.

W. FREAM, LL.D., B.Sc., *Lecturer.*

FORESTRY.

SECOND-CLASS CERTIFICATES.—1. J. King; 2. H. S. Daine; 3. A. W. Reid.

FRED. BAILEY, Lieut.-Colonel R.E., *Lecturer.*

MUSIC.

HISTORY OF MUSIC.

First-Class Certificates of Merit.—1. Christina Lucy Struthers Edinburgh (*Medallist*); 2. Minnie Millar, Edinburgh; 3. Robert Hutton Malcolm, Edinburgh; 4. William Gilchrist Cochrane, Leith; 5. Helen Lyon Smith, Edinburgh; 6. Matthew Shirlaw, Loanhead.

Second-Class Certificates of Merit.—7. Marjory Kennedy Fraser, Edinburgh; 8. Elizabeth Irvine, Edinburgh; 9. Elizabeth Pagan, Edinburgh; 10. Isabella M. Pagan, Edinburgh; 11. Isabella Ritchie, Edinburgh.

HARMONY, MELODY, AND RHYTHM.

First-Class Certificates of Merit.—1. William Gilchrist Cochrane, Leith (*Medallist*); 2. Christina Lucy Struthers, Edinburgh; 3. Robert Hutton Malcolm, Edinburgh; 4. Minnie Millar, Edinburgh.

Second-Class Certificates of Merit.—5. Matthew Shirlaw, Loanhead.

FORMAL AND ÆSTHETICAL ANALYSIS.

First-Class Certificates of Merit.—1. Robert Hutton Malcolm, Edinburgh (*Medallist*); 2. William Gilchrist Cochrane, Leith; 3. Christina Lucy Struthers, Edinburgh; 4. Minnie Millar, Edinburgh; 5. Margaret Fullarton Kennedy, Edinburgh; 6. Marjory Kennedy Fraser, Edinburgh; 7. Matthew Shirlaw, Loanhead.

Second-Class Certificates of Merit.—8. Helen Lyon Smith, Edinburgh; 9. Beatrice M. R. Boswall, Wardie; 10. E. E. G. Dallas, Edinburgh; 11. J. F. Guyer, Edinburgh.

FR. NIECKS, *Professor.*

TUTORIAL CLASSES.

SUMMER SESSION, 1892.

HUMANITY.

THIRD CLASS.

This Class met regularly, but no Competitive Examinations were held.

SENIOR CLASS.

Prizes and First-Class Certificates of Merit.—1. Hugh L. Jackson, Edinburgh; 2. Steuart E. Pears, Edinburgh; 3. Ernest F. Bashford, Portobello; 4. William W. Smith, Dumfriesshire.

Second-Class Certificates of Merit.—5. Malcolm Campbell, Edinburgh; 6. W. H. Houldsworth, Lancashire; 7. William Ogilvie, Edinburgh; 8. J. P. Murdoch, Dalkeith; 9. Charles J. Lauchlan, Edinburgh; 10. R. Y. Whitton, Nagpore, India.

LATIN PROSE COMPOSITITION.—1. Hugh L. Jackson, Edinburgh; 2. Ernest F. Bashford, Portobello; 3. Steuart E. Pears, Edinburgh, and W. W. Smith, Dumfriesshire—equal; 5. Malcolm Campbell, Edinburgh.

FRANCIS R. JAMIESON, M.A.,
Assistant to Professor of Humanity.

GREEK.

THIRD CLASS.

No Competitive Examinations held.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. H. L. Jackson, Edinburgh; 2. S. E. Pears, Edinburgh; 3. J. P. Murdoch, Dalkeith, and W. Wright Smith, Dumfriesshire—equal.

SECOND-CLASS CERTIFICATES.—5. W. H. Houldsworth, Burnley; 6. William Ogilvy, Edinburgh; 7. D. J. Stuart Lyell, Forfarshire.

COMPOSITION.—1. H. L. Jackson; 2. J. P. Murdoch; 3. S. E. Pears.

A. DOUGLAS THOMSON, M.A.,
Assistant to the Professor of Greek.

MATHEMATICS.

JUNIOR CLASS.

In this Class no Prizes were awarded.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. F. A. Barnardo, India; 2. S. Milligan, Dumfriesshire; 3. W. J. Keith, Portobello; 4. F. Guthrie Smith, Edinburgh.

SECOND-CLASS CERTIFICATES.—J. A. Craig, Edinburgh; E. F. Gibson, Edinburgh; S. E. Pears, Edinburgh; C. S. Pennell, Fife; R. L. Ross, Edinburgh.

ADVANCED CLASS.

In this Class no Examinations were held.

R. E. ALLARDICE,
Assistant to the Professor of Mathematics.

LOGIC AND PSYCHOLOGY.

FIRST-CLASS CERTIFICATE.—S. Middlemass, Edinburgh.

SECOND-CLASS CERTIFICATES.—D. Mekie, Edinburgh; J. Y. Simpson, Edinburgh; D. B. Waters, Caithness-shire; A. G. Watson, Kirkcudbright.

R. P. HARDIE, M.A.,
Assistant to Professor of Logic and Metaphysics.

MORAL PHILOSOPHY.

FIRST-CLASS CERTIFICATE OF MERIT AND PRIZE.—W. Macpherson.
SECOND-CLASS CERTIFICATES OF MERIT.—J. W. Robertson; A. Duncan Smith.

ANDREW N. BOGLE,
Interim Assistant to Professor of Moral Philosophy.

RHETORIC AND ENGLISH LITERATURE.

SENIOR CLASS.

No Examinations were held, but Critical Essays were prescribed.
1. John Stevenson, Kirkcudbrightshire.
HONOURABLE MENTION.—Charles S. Edgar, Ayr.

G. GREGORY SMITH, M.A.,
Assistant to the Professor of Rhetoric and English Literature.

Examination Papers for Degrees in Arts.

PRELIMINARY EXAMINATION PAPERS FOR DEGREES IN ARTS AND SCIENCE.

The Papers in Higher Latin, Higher Greek, Higher Mathematics, and English (including History and Geography), in October 1893, *were also the Examination Papers for First Year Open Bursaries.*

ENGLISH.

FIRST PAPER.

Monday, 17*th October* 1892.—1 *to* 2 *o'clock.*

Write an Essay, within the limit of two or three pages, on one of the following subjects:—

(*a*) "No man but a blockhead ever wrote except for money."—(*Johnson.*)
"Writing for money is, at bottom, the ruin of literature."—(*Schopenhauer.*)
(*b*) John Bull.
(*c*) "In poetry, as elsewhere, those who forget themselves are the last to be forgotten by others."

SECOND PAPER.

Monday, 17th October 1892.—2 to 4 o'clock.

Pass Candidates must not attempt more than SIX *questions.*

1. Give the origin and explain the history of *eight* of the following words, taking *four* from each section :—
   - (i) Expunge ; silly ; comfit ; folio ; conceit ; supercilious ; villain ; entail.
   - (ii) Matriculation ; bursary ; Faculty ; Dean ; Fellowship ; album ; examination.

2. Explain the following terms :—double comparative ; broken vowel ; suffix ; patronymic ; homonym ; metathesis ; feminine ending ; case ; substantive adverb ; assonance.

Give an example of each.

3. (i) What traces of *reduplication* remain in the English verb?

(ii) Explain these forms :—children ; commons ; pease ; feet ; riches. What is the plural of summons?

4. Discuss the grammar of the following passages :—
   - (i) What is he for a fool that betroths himself to unquietness.
   - (ii) From the first corse till he that died to-day.
   - (iii) Good my mouse of virtue.
   - (iv) Study me how to please the eye indeed.
   - (v) Rather proclaim it, Westmoreland, through our host,
That he which hath no stomach to this fight,
Let him depart.
   - (vi) That gentleness as I was wont to have.

5. Name the leading historians who have written since the death of Macaulay. Give their chief works, and characterise the style and method of any *one* of the authors named.

6. Write a brief note on any *six* of the following characters—Mr Greatheart ; The Wife of Bath ; Gloriana ; Malvolio ; Dugald Dalgetty ; Teufelsdröckh ; Nevill Beauchamp ; Tony Lumpkin ; Gradgrind ; Joseph Surface ; Becky Sharp ; Sir Roger de Coverley.

7. Sketch the literary life of Pope *or* Milton.

8. Name the author and give the date of each of the following works :—*Lyrical Ballads ; The Shepheardes Calender ; The Dunciad ; A Tale of a Tub ; An Essay of Dramatic Poesy ; The Thrissil and the Rois ; English Bards and Scotch Reviewers ; The Adventures of Joseph Andrews.* Explain the occasion upon which each was written.

9. What literary memories twine round the local history of the following places and their immediate neighbourhood :—Kilcolman, Stoke Pogis, The Inns of Court, Rydal Mount, Hampstead, Twickenham, Hawthornden.

10. Where in English verse or prose have the following subjects been treated :—Night ; A Sea-fight ; The Nightingale ; A Fairy Revel ; Rustic Happiness ; a Pedant ? Describe (or quote) any one of the passages chosen.

11. Give a brief account of the Pre-Shakesperean Drama. Distinguish carefully the chief *forms* of dramatic writing then in vogue.

12. What is the meaning of the term *Euphuism ?* Explain it critically and historically. Have you in your reading come across any misconceptions about its characteristics ?

13. Give a general sketch of the state of literature in Scotland during the reign of James VI., *or* during the first half of the Eighteenth Century.

14. Describe the following stanzas prosodically, giving, if possible, the metrical and rhyming formulae :—

(*a*) Where the bee sucks, there suck I :
In a cowslip's bell I lie ;
There I couch when owls do cry.
On the bat's back I do fly
After summer merrily.
Merrily, merrily shall I live now
Under the blossom that hangs on the bough.

(*b*) O World ! O Life ! O Time !
On whose last steps I climb,
  Trembling at that where I had stood before :
When will return the glory of your prime ?
  No more—Oh, never more !

15. Transcribe (*a*) in Modern English ; and explain (*b*), without change of metaphor—

(*a*) Riche & pore, ȝonge & olde,
Whil ȝe habbeþ wyt at wolde,
  Secheþ ore soule bote ;
For when ȝe weneþ alrebest
Forte haue ro & rest,
  þe ax ys at þe rote.
' Hope of long lyf gyleþ mony god wyf.'

(*b*) Tempest thee noght al croked to redresse,
In trust of hir that turneth as a bal :
Gret reste stant in litel besinesse.
And eek be war to sporne ageyn an al ;
Strive noght, as doth the crokke with the wal.
Daunte thy-self, that dauntest otheres dede ;
And trouthe shal delivere, hit is no drede.

16. Describe the chief extraneous influences on the English vocabulary from the time of Edward the Confessor to the Restoration.

17. Give an account of any *one* of the shorter writings of De Quincey, Carlyle, or Ruskin.

18. Characterise the style of any one of the following, and attempt a comparison with that of any other in the list :—R. L. Stevenson, Rider Haggard, Hall Caine, Rudyard Kipling, Thomas Hardy.

FIRST PAPER.

Wednesday, 5th April 1893.—9 *to* 11 *o'clock.*

1. Write an Essay, within the limit of three pages, on *one* of the following subjects :—

Friendship.
From School to College.
"What a sense of security in an old book which Time has criticised for us!"

N.B.—*Candidates are recommended to spend one hour on this Question.*

2. Paraphrase *one* of these passages :—

(*a*) Between the acting of a dreadful thing
And the first motion, all the interim is
Like a phantasma or a hideous dream :
The Genius and the mortal instruments
Are then in council, and the state of man,
Like to a little kingdom, suffers then
The nature of an insurrection.

(*b*) All this, of the importance and supreme importance of the Man of Letters in modern Society, and how the Press is to such a degree superseding the Pulpit, the Senate, the *Senatus Academicus*, and much else, has been admitted for a good while ; and recognised often enough, in late times, with a sort of sentimental triumph and wonderment. It seems to me, the Sentimental by and by will have to give place to the Practical. If Men of Letters *are* so incalculably influential, actually performing such work for us from age to age, and even from day to day, then I think we may conclude that Men of Letters will not always wander like unrecognised unregulated Ishmaelites among us !

3. Give a general analysis of the following :—

It is, nevertheless, true that certain favoured people do have beneficent omens to prepare them for their parts when the hero is in full career, *so* that they really may be nerved to meet him ; ay, and to check him in his course, *had* they that signal courage.

Parse the words in italics.

4. Give the derivation of *five* of these words :—

Wilderness ; peasant ; noun ; offal ; influenza ; conceit ; allay ; embrace ; ally ; fealty ; alley ; atone.

5. Correct and punctuate the following sentences :—
   (*a*) Between you and I not a line of his pages show the slightest ability.
   (*b*) What a difference between his father that went to America thirty years since and he.
   (*c*) Setting sail at daybreak no sooner had the anchor been weighed when the captain who it was alleged the merchants had bribed ordered the sailors to bind all the passengers with ropes that were on board.

SECOND PAPER.

Wednesday, 5th April 1893.—11 *to* 1 *o'clock.*

1. What do you know of the works of any *five* of these authors :—
John Dryden ; Alfred Tennyson ; Alexander Pope ; William Wordsworth ; Samuel Johnson ; Ben Jonson ; John Ruskin ; Edmund Spenser ; Jonathan Swift ?

2. Explain these literary forms :—Epic ; Sonnet ; Ode ; Elegy. Name an example of each.

3. Where do you meet the following characters :—
Mr Pecksniff ; Polonius ; Puck ; Falstaff ; Jonathan Oldbuck ; Peter Bell ; Childe Harold ; Colonel Newcome ; Dr Primrose ; Cuddie Headrigg ?
Describe any *one*.

4. Write a note on *four* of the following :—
The Great Charter ; The Heptarchy ; Simon de Montfort ; The Black Death ; Villeinage ; Flodden ; The Field of the Cloth of Gold ; The Casket Letters ; Battle of Largs ; The Pale.

Or,

The Hampton Court Conference ; The Petition of Right ; The Clarendon Code ; Titus Oates ; Glencoe ; The Reform Bill ; Plassey ; The Excise Bill ; The South Sea Scheme ; The Forty-Five.

5. Answer any *one* of these sections :—
   (*a*) Explain the causes and sketch the progress of the Hundred Years' War.
   (*b*) Give some account of the policy of James IV. of Scotland.
   (*c*) Explain the ecclesiastical policy of Henry VIII.
   (*d*) Trace the history of the Long Parliament.
   (*e*) What events led up to the War of American Independence ? Mention the chief incidents of the War.

6. What do you know of *ten* of the following :—
Belgrade ; Milan ; Mashonaland ; Gold Coast ; Adelaide ; Tonquin ; Pittsburg ; Black Forest ; The Downs ; Samoa ;

Avignon; Dunedin; Guadalquivir; Lipari Islands; Sea of Azof; Mandalay; Nijnei-Novgorod; Ajaccio; Smyrna; The Deccan?

7. Answer any *one* of these sections:—
   (*a*) Account for the growth of Glasgow, Manchester, Bristol, Middlesborough, and Belfast.
   (*b*) Name the University towns of the United Kingdom. Where are the chief public collections of art-treasures in the British Isles? Name the leading English summer-resorts south of the Thames.
   (*c*) Describe fully, in words or by a sketch-map, the river-system of Yorkshire.

HISTORY AND GEOGRAPHY.

Monday, 17th October 1892.—4 *to* 4.45 *o'clock.*

(*Candidates must answer at least* TWO *Questions in* EACH *section.*)

I.

1. Sketch the history of the Danish Invasions. How was their influence chiefly felt?

2. What were the leading results of the rule of Henry II.?

3. Describe the causes which led to the revolt of 1381? What were the primary effects of the movement?

4. Explain the origin of the House of Stewart, and give a chronological list of the sovereigns of that name.

5. What were the general causes which led to the Reformation in England?

6. Contrast the state of Scotland under James IV. and under James V.

7. State carefully the claim of Henry VII. to the throne of England.

8. Distinguish:—The First Covenant; The National Covenant; The Solemn League and Covenant. Who were the "Covenanters"?

9. Sketch the conduct of the Country Party during the reign of Charles II.

10. Give an account of the career of the Great Marquis of Montrose.

11. Describe the events which caused the overthrow of Pitt in 1761.

12. What matters of historical importance are connected with these names:—Becket; Junius; Charles Montagu; Thomas Cromwell; Titus Oates; John, Duke of Bedford?

II.

(*Illustrative sketch-maps will add to the value of the answers.*)

1. Describe (*a*) the railway-routes between Edinburgh and London, naming in order the chief towns passed, and (*b*) the chief routes between the S. and S.E. coasts of England and the Continent, stating the length of the sea-journey (in hours or miles) in each case.

2. Where, in England and Scotland, is the population densest? Can you offer any hints towards an explanation of the phenomenon in any *two* of the places named?

3. (*a*) What districts in Scotland are identified as the home of the Scotts, the Mackays, the Maxwells, the Gordons, the Macgregors, the Macdonalds.
   (*b*) Enumerate the countries of Europe where French and German are spoken, exclusively or in part.

4. Carlyle's second Continental tour included, among other places, Rotterdam, Bonn, Coblenz, Mainz, Frankfort, Marburg, Erfurt, Weimar, Leipzig, Dresden, and Berlin. Describe the position of each relatively to the preceding; and name the chief rivers which he passed.

5. Describe the land-routes by which a traveller may enter Italy from the north.

6. Give geographical descriptions of the Thames and Tay from source to estuary.

7. Enumerate the British Colonies and Protectorates in Africa. Give the boundaries and rivers of any *two*, and describe their chief commercial interests.

HIGHER LATIN.

Saturday, 15*th October* 1892—9 *to* 12 *o'clock.*

I. Translate into Latin:—

The commissioners fell upon their knees at Egmont's feet, and begged for mercy. They implored him at least to send this imperious message by some other hand than theirs, and to permit them to absent themselves from the city. They should be torn limb from limb, they said, by the enraged inhabitants, if they dared to present themselves with such instructions before them. Egmont, however, assured them that they should be sent into the city, bound hand and foot, if they did not instantly obey his orders. The deputies, therefore, with heavy hearts, were fain to return home with this bitter result to their negotiations. The terms were rejected, as a matter of course, but the gloomy forebodings of the commissioners, as to their own fate at the hands of their fellow-citizens, were not fulfilled.

II. Translate:—

(1) Iamque erat orta dies. Passis sedet illa capillis,
  Ut solet ad nati mater itura rogum:
Grandaevumque patrem fido cum coniuge castris
  Evocat. Et posita venit uterque mora.
Utque vident habitum, quae luctus causa, requirunt,
  Cui paret exequias, quove sit icta malo?
Illa diu reticet, pudibundaque celat amictu
  Ora: fluunt lacrimae more perennis aquae.
Hinc pater, hinc coniunx lacrimas solantur, et orant
  Indicet, et caeco flentque paventque metu.

Ter conata loqui, ter destitit. Ausaque quarto,
 Non oculos ideo sustulit illa suos.
"Hoc quoque Tarquinio debebimus? Eloquar," inquit,
 "Eloquar infelix dedecus ipsa meum?"

(2) Nocte media, cum auspicio operam dedisset, profectus, ut locum quem vellet, priusquam hostes sentirent, caperet, praeter castra hostium circumducit et prima luce acie instructa sub ipsum vallum tres cohortes mittit. Mirantes barbari ab tergo adparuisse Romanum discurrere ipsi ad arma. Interim consul apud suos "nusquam nisi in virtute spes est, milites," inquit "et ego sedulo, ne esset, feci. Inter castra nostra et nos medii hostes et ab tergo hostium ager est. Quod pulcherrimum, idem tutissimum: in virtute spem positam habere." Sub haec cohortes recipi iubet, ut barbaros simulatione fugae eliceret. Id quod crediderat evenit. Pertimuisse et cedere rati Romanos porta erumpunt et quantum inter castra sua et aciem hostium relictum erat loci armatis complent. Dum trepidant acie instruenda, consul iam paratis ordinatisque omnibus incompositos adgreditur. Equites primos ab utroque cornu in pugnam educit. Sed in dextro extemplo pulsi, cedentesque trepidi etiam pediti terrorem intulere. Quod ubi consul vidit, duas cohortes delectas ab dextro latere hostium circumduci iubet et ab tergo se ostendere, priusquam concurrerent peditum acies.

III. Translate into Latin:—

(1) I don't know whether I quite understand what you mean.

(2) There is no doubt that if he had seen him he would have killed him on the spot.

(3) I am afraid you will not find any one so eager for revolution as you are.

Construct sentences illustrating the use of *quare*, *quamvis*, *postquam*, *dummodo*, *proinde*, *quivis*, *scilicet*, *nedum*.

IV. Answer *one* of the following questions:—

(1) Which were the curule magistrates at Rome? Tell what you know of their functions and the mode of their election.

(2) Give the date and chief battles in one of the greater wars of Rome. Mention also the more important generals on either side.

FOR CANDIDATES FOR BURSARIES ONLY.

Candidates are requested to write this answer on a separate sheet.

Translate:—

Respicere exemplar vitae morumque iubebo
Doctum imitatorem et vivas hinc ducere voces.
Interdum speciosa locis morataque recte
Fabula nullius veneris, sine pondere et arte,
Valdius oblectat populum, meliusque moratur,
Quam versus inopes rerum, nugaeque canorae:
Graiis ingenium, Graiis dedit ore rotundo
Musa loqui, praeter laudem nullius avaris.

Romani pueri longis rationibus assem
Discunt in partes centum diducere. "Dicat
Filius Albini; si de quincunce remota est
Uncia, quid superat? Poteras dixisse." "Triens." "Eu!
Rem poteris servare tuam. Redit uncia: quid fit?"
"Semis." An haec animos aerugo et cura peculi
Cum semel imbuerit, speramus carmina fingi
Posse linenda cedro, et levi servanda cupresso?

Write a *very short* life of Horace, showing when his principal works were published.

Monday, 3*rd April* 1893.—9 *to* 12 *o'clock.*

1. Translate into Latin:—

The spirit of England was effectually stirred. Her fleets, to the amount of not less than 500 ships of war, traversed the seas in all directions, devastated the coasts of the countries in which the power of the Consul was predominant, and from time to time made inroads into the French ports, burning and destroying the shipping. At home the army was recruited and strengthened to an unexampled extent. Camps were formed along the English coasts opposite to France, and the king in person was continually to be seen in the middle of them. By night beacons blazed on every hill-top throughout the island; and the armed citizens showed their courage on many occasions of false alarm by the speed with which they marched on those points where there was thought to be danger.

2. Translate:—

(1) At mihi Persephone nigram denuntiat horam:
Immerito iuveni parce nocere, Dea.
Non ego tentavi, nulli temeranda piorum,
Audax laudandæ sacra docere Deæ.
Nec mea mortiferis infecit pocula succis
Dextera, nec cuiquam tetra venena dedit;
Nec nos sacrilegos templis admovimus ignes;
Nec cor solicitant facta nefanda meum;
Nec nos, insanæ meditantes iurgia linguæ,
Impia in adversos solvimus ora Deos.
Et nondum cani nigros læsere capillos;
Nec venit tardo curva senecta pede.
Quid fraudare iuvat vitem crescentibus uvis
Et modo nata mala vellere poma manu?

(2) Aetoli legati in senatum introducti, cum et causa eos sua et fortuna hortaretur, ut confitendo seu culpae seu errori veniam peterent supplices, orsi a beneficiis in populum Romanum, et prope exprobrantes virtutem suam in Philippi bello, et offenderunt aures insolentia sermonis, et eo vetera et oblitterata repetendo rem adduxerunt, ut haud paulo plurium maleficiorum gentis quam beneficiorum memoria subiret

animos patrum, et quibus misericordia opus erat, iram et odium irritarent. interrogati ab uno senatore, permitterentne arbitrium de se populo Romano, deinde ab altero, habiturine eosdem quos populus Romanus socios et hostes essent, nihil ad ea respondentes egredi templo iussi sunt. conclamatum deinde prope ab universo senatu est totos adhuc Antiochi Aetolos esse, et ex unica ea spe pendere animos eorum: itaque bellum cum haud dubiis hostibus gerendum perdomandosque feroces animos esse. illa etiam res accendit, quod eo ipso tempore, quo pacem ab Romanis petebant, Dolopiae atque Athamaniae bellum inferebant.

3. Give the stems, the ablat. sing. and genit. plur. of *Æneades*, *nummus*, *clavis*, *cor*, *Samnis*.

Write out the pres. imper. act. and pres. indic. pass. of *fero*, and the pres. indic. of *edo*, *inquam*, *fio*.

Give perf. indic., supine and pres. infin. of the verbs *fallo*, *recenseo*, *cieo*, *plecto*, *tremo*, *pergo*, *trudo*, *tundo*, *lavo*, *mulgeo*.

4. Translate into Latin:—

I fear the thing is not so simple as it appears.

He promised to bring us news at the earliest possible moment.

He said it would have made little difference if you had stayed away.

I know not if there be deep wisdom in the writings of Horace: but at all events I am strangely delighted as I read his pages.

ELEMENTARY LATIN.

Wednesday, 12*th October* 1892.—9 *to* 12 *o'clock.*

I. Translate:—

Erant apud Caesarem in equitum numero Allobroges duo fratres, Raucillus et Egus, Adbucilli filii, qui principatum in civitate multis annis obtinuerat, singulari virtute homines, quorum opera Caesar omnibus Gallicis bellis optima fortissimaque erat usus. His domi ob has causas amplissimos magistratus mandaverat atque eos extra ordinem in senatum legendos curaverat agrosque in Gallia ex hostibus captos praemiaque rei pecuniariae magna tribuerat locupletesque ex egentibus fecerat. Hi propter virtutem non solum apud Caesarem in honore erant, sed etiam apud exercitum cari habebantur; sed freti amicitia Caesaris et stulta ac barbara arrogantia elati despiciebant suos stipendiumque equitum fraudabant et praedam omnem domum avertebant. Quibus illi rebus permoti universi Caesarem adierunt palamque de eorum iniuriis sunt questi et ad cetera addiderunt falsum ab his equitum numerum deferri, quorum stipendium averterent.

II. In the above, parse the following words, accounting in each instance for the case or mood employed: *virtute*, *opera*, *domi*, *erat usus*, *legendos*, *amicitia*, *elati*, *sunt questi*, *deferri*, *averterent*.

III. (*a*) Give the gender, declension, the genit. and abl. sing., and the genit. plur. of the nouns *aper*, *iter*, *pater*, *pectus*, *pelagus*, *munus*, *nox*, *crux*, *vis*, *domus*, *dies*, *genu*,—marking the *quantity* of the terminations. Decline throughout *acris acies, sacrum poema.*

(β) Give the comparative and superlative of *similis*, *maturus*, *beneficus*, *vetus*, *tuto*, *parum.*

(γ) Write down the 2nd pers. sing. pf. indic. act.,
2nd pers. plur. fut. indic. pass.,
fut. infin. passive,
and meaning
of *vinco*, *volvo*, *iuvo*, *figo*, *fingo*, *pendo*, *augeo*, *sepelio.*

(δ) Write out in full the pres. indic. of *malo*, *aio*, *inquam.*

(ε) State the exact meaning of *quisnam*, *ecquis*, *numquis*, *quilibet*, *uter*, *cuias*, *unusquisque*, *necne*, *iamiam.* What is the Latin for *fourfold*, 14 *a piece*, 24, 45, 400 *times*, 934, 400,000.

IV. Translate into Latin :—

Who commanded you to do so great a deed?

Leaving his wife and children at home, he hastened to the camp.

He promised to come as quickly as possible, to deliver us from the tyrant.

If I had known that you were present, I should have endeavoured to leave my business and come.

V. Translate into Latin :—

They heard him, and like men took to the oars (*remus*); but little knew what opposite danger, in shunning that rock, they must be thrown upon. For Ulysses had concealed from them the dangers which Scylla was to bring: their terror would else have robbed them of all care to steer (*guberno*), or move an oar, and have made them hide under the hatches (*fori, -orum*), for fear of seeing her, where he and they must have died an idle death. But even then he forgot the precautions (*remedium*) which Circe had given him to prevent harm to his person; who had willed him not to arm, or show himself at once to Scylla. But resolved to venture life (*discrimen capitis adeo*) for his brave companions, he could not contain himself, but armed in all points, and taking a lance in either hand, he went up to the foredeck (*prora*), and looked when Scylla would appear.

Wednesday, 5th April 1893.—2 *to* 5 *o'clock.*

1. Translate :—

Curio, ubi perterritis omnibus neque cohortationes suas neque preces audiri intellegit, unam ut in miseris rebus spem reliquam salutis esse arbitratus proximos colles capere universos atque eo signa inferri iubet. Hos quoque praeoccupat missus a Saburra equitatus. Tum vero ad summam desperationem nostri perveniunt et partim fugientes ab equitatu interficiuntur, partim integri procumbunt. Hortatur Curionem Cn. Domitius, praefectus equitum, cum paucis equitibus circumsistens, ut fuga salutem petat atque in castra contendat, et se ab eo non discessurum pollicetur. At Curio numquam se amisso exercitu, quem a

Caesare fidei commissum acceperit, in eius conspectum reversurum confirmat atque ita proelians interficitur. Equites ex proelio perpauci se recipiunt; sed ii, quos ad novissimum agmen equorum reficiendorum causa substitisse demonstratum est, fuga totius exercitus procul animadversa sese incolumes in castra conferunt. Milites ad unum omnes interficiuntur.

2. In the above, parse the following words, accounting in each instance for the case or mood employed, and giving the principal parts of the verbs: *omnibus*, *intellegit*, *arbitratus*, *inferri*, *summam*, *petat*, *discessurum*, *acceperit*, *substitisse*, *animadversa*.

3. (α) Give the gender, declension, the genitive and ablative singular, and the genitive plural of the nouns *virga*, *virus*, *littus*, *domus*, *ager*, *frater*, *nubes*, *comes*, *amnis*, *leo*, *imago*, *cliens*. Decline throughout *bonus dies*, *turpe vitium*.

(β) Decline *aliquis*, *quidam*.

(γ) Write down the 2nd singular pluperfect subjunctive active,
3rd singular present subjunctive passive,
future participle,
and meaning of
seco, *mordeo*, *misceo*, *augeo*, *capio*, *tribuo*, *duco*, *sentio*.

(δ) Write out in full the present indicative of *nolo*.

(ε) What is the exact meaning of *quisque*, *totus*, *ceteri*, *quando*, *aliquando*, *etsi*, *donec*, *scilicet*.

4. Translate into Latin:—

(1) No one thought he was a man of this sort.
(2) As soon as we saw you, we knew something had happened.
(3) Leave your business and come here as quickly as possible.
(4) I fear you will not prosper so long as the war goes on.
(5) If he were here now, he would rejoice at your good fortune.

5. Translate into Latin:—

The Samnites had as commander that year C. Pontius, the son of a most prudent father, himself a consummate (*primus*) warrior and leader. When the ambassadors who had been sent to Rome returned without peace being made, he said, "Do not suppose that nothing has been achieved by this embassy. The anger of the celestials which lighted on us for breaking the treaty has been removed (*expio*). As for those whose will it was (*quibus cordi fuit*) that we should be driven to seek for peace, it was not their will that our embassy should be so haughtily spurned by the Romans. For what more could have been done to appease the gods and to conciliate (*mitigo*) men? We sent back their property, which was taken as booty, and was ours by the law of war; we gave up to their fate the instigators (*auctor*) of the war: we even conveyed (*porto*) their goods to Rome lest any evil infection (*contagio noxae*) should remain with us."

HIGHER GREEK.

Saturday, 15*th October.*—1 *to* 4 *o'clock.*

1. Translate :—

Οὐ μὲν δὴ πρέπει γε φιλόμουσον ἄνδρα τῶν τοιούτων ἀνήκοον εἶναι· λέγεται δ' ὥς ποτ' ἦσαν οὗτοι ἄνθρωποι τῶν πρὶν Μούσας γεγονέναι, γενομένων δὲ Μουσῶν καὶ φανείσης ᾠδῆς οὕτως ἄρα τινὲς τῶν τότε ἐξεπλάγησαν ὑφ' ἡδονῆς, ὥστε ᾄδοντες ἠμέλησαν σίτων τε καὶ ποτῶν, καὶ ἔλαθον τελευτήσαντες αὑτούς· ἐξ ὧν τὸ τεττίγων γένος μετ' ἐκεῖνο φύεται, γέρας τοῦτο παρὰ Μουσῶν λαβόν, μηδὲν τροφῆς δεῖσθαι γενόμενον, ἀλλ' ἄσιτόν τε καὶ ἄποτον εὐθὺς ᾄδειν, ἕως ἂν τελευτήσῃ, καὶ μετὰ ταῦτα ἐλθὸν παρὰ Μούσας ἀπαγγέλλειν, τίς τίνα αὐτῶν τιμᾷ τῶν ἐνθάδε. Τερψιχόρᾳ μὲν οὖν τοὺς ἐν τοῖς χοροῖς τετιμηκότας αὐτὴν ἀπαγγέλλοντες ποιοῦσι προσφιλεστέρους, τῇ δὲ Ἐρατοῖ τοὺς ἐν τοῖς ἐρωτικοῖς, καὶ ταῖς ἄλλαις οὕτω, κατὰ τὸ εἶδος ἑκάστης τιμῆς· τῇ δὲ πρεσβυτάτῃ Καλλιόπῃ καὶ τῇ μετ' αὐτὴν Οὐρανίᾳ τοὺς ἐν φιλοσοφίᾳ διάγοντάς τε παὶ τιμῶντας τὴν ἐκείνων μουσικὴν ἀγγέλλουσιν, αἳ δὴ μάλιστα τῶν Μουσῶν περί τε οὐρανὸν καὶ λόγους οὖσαι θείους τε καὶ ἀνθρωπίνους ἱᾶσι καλλίστην φωνήν.

τέττιξ=grasshopper.

II. Translate *one* of the following passages :—

(1) ὤ μοι ἐγώ, τέων αὖτε βροτῶν ἐς γαῖαν ἱκάνω;
ἦ ῥ' οἵγ' ὑβρισταί τε καὶ ἄγριοι οὐδὲ δίκαιοι,
ἠὲ φιλόξεινοι, καί σφιν νόος ἐστὶ θεουδής;
πῇ δὴ χρήματα πολλὰ φέρω τάδε; πῇ τε καὶ αὐτὸς
πλάζομαι; αἴθ' ὄφελον μεῖναι παρὰ Φαιήκεσσιν
αὐτοῦ· ἐγὼ δέ κεν ἄλλον ὑπερμενέων βασιλήων
ἐξικόμην, ὅς κέν μ' ἐφίλει καὶ ἔπεμπε νέεσθαι.
νῦν δ' οὔτ' ἄρ πῃ θέσθαι ἐπίσταμαι, οὐδὲ μὲν αὐτοῦ
καλλείψω, μή πώς μοι ἕλωρ ἄλλοισι γένηται.
ὢ πόποι, οὐκ ἄρα πάντα νοήμονες οὐδὲ δίκαιοι
ἦσαν Φαιήκων ἡγήτορες ἠδὲ μέδοντες,
οἵ μ' εἰς ἄλλην γαῖαν ἀπήγαγον· ἦ τέ μ' ἔφαντο
ἄξειν εἰς Ἰθάκην εὐδείελον, οὐδ' ἐτέλεσσαν.

Write a note on the Homeric use of κεν.

(2) εἰ πᾶσι ταὐτὸ καλὸν ἔφυ σοφόν θ' ἅμα,
οὐκ ἦν ἂν ἀμφίλεκτος ἀνθρώποις ἔρις·
νῦν δ' οὔθ' ὅμοιον οὐδὲν οὔτ' ἴσον βροτοῖς,
πλὴν ὀνόμασιν, τὸ δ' ἔργον οὐκ ἔστιν τόδε.
ἐγὼ γὰρ οὐδέν, μῆτερ, ἀποκρύψας ἐρῶ·
ἄστρων ἂν ἔλθοιμ' ἡλίου πρὸς ἀντολὰς
καὶ γῆς ἔνερθε, δυνατὸς ὢν δρᾶσαι τάδε,
τὴν θεῶν μεγίστην ὥστ ἔχειν τυραννίδα.
τοῦτ' οὖν τὸ χρηστόν, μῆτερ, οὐχὶ βούλομαι
ἄλλῳ παρεῖναι μᾶλλον ἢ σώζειν ἐμοί·

ἀνανδρία γάρ, τὸ πλέον ὅστις ἀπολέσας
τοὔλασσον ἔλαβε. πρὸς δὲ τοῖσδ' αἰσχύνομαι,
ἐλθόντα σὺν ὅπλοις τόνδε καὶ πορθοῦντα γῆν
τυχεῖν ἃ χρῄζει.

Scan the first and the thirteenth lines.

III. Give the stems, genit. sing., dat. and accus. plur. of :—ταμίας, λέων, ἔρις, τεῖχος, γυνή, βοῦς, υἱός, βῆμα.

Decline in full εὐκλεὴς πόλις, μεῖζον τέρας, σύ, τοσοῦτος.

Parse πειθοῦς, ἐλέφαντε, ἀρνός, σφῶν, ὡρμᾶτο, ἐπιθώμεθα, προσήσομαι, ἠξίους, χρήσαιο, διδῷ, τεθέν, εἴων, ἐξόν, ἐξελεῖν.

Give the chief tenses of μιμνήσκω, αἰσθάνομαι, πίμπλημι, χώννυμι, βάλλω, ἀπατάω, σφάζω, κομίζω, κοσμέω, ζάω, οἴομαι, ἵημι.

Write out the pres. indic. mid. or pass. of τιμῶ (contracted forms), the fut. indic. act. of στέλλω, and the pf. indic. pass. of λαμβάνω.

IV. Translate into Greek :—

(1) Odysseus, the wisest of all the Greeks who went to Troy, returned (ἐπανέρχομαι) home chiefly by the counsel of Athene.

(2) I have known many more fortunate, but none more moderate (μέτριος) in prosperity, or more courageous in adversity.

(3) So great a fear fell upon the Athenians, that not one of the orators dared to speak except Demosthenes.

(4) Lycurgus ordered that when he was dead his body should be thrown into the sea, fearing lest if it were brought to Sparta the citizens should think themselves free from the oath which they had sworn (κατόμνυμι) to introduce no change (*introduce a change*=νεωτερίζω).

(5) The Athenians said that they would be evilly treated (δεινὰ πάσχω), if after taking (μετέχω) the largest share of evils they should be adjudged (ἀξιόω) to have a less share in the honours. For who ought to have the leadership (ἡγεμονία)? was it not those who had most approved themselves (εὐδοκιμέω) in the former war?

FOR CANDIDATES FOR BURSARIES ONLY.

(*You are requested to write this answer on a separate sheet.*)

V. For Greek Prose :—

His arrival was in a critical moment. The Spaniards and Peruvians fixed their eyes upon him with equal solicitude. The former, as he did not study to conceal his pretensions, were at a loss whether to welcome him as a deliverer or to take precautions against him as an enemy. The latter, knowing the points in contest between him and his countrymen, flattered themselves that they had more to hope than to dread from his operations. Almagro himself, unacquainted with the detail of the events which had happened in his absence, and solicitous to learn the precise posture of affairs, advanced towards the capital slowly and with great circumspection.

Saturday, 1st *April* 1893.—1 *to* 4 *o'clock.*

I. Translate :—

(1) *Λέγεις, ἔφη, πόρρω που εἶναι τῇ πόλει τὴν καλοκἀγαθίαν. πότε γὰρ οὕτως Ἀθηναῖοι ὥσπερ Λακεδαιμόνιοι ἢ πρεσβυτέρους αἰδέσονται, οἳ ἀπὸ τῶν πατέρων ἄρχονται καταφρονεῖν τῶν γεραιτέρων· η σωμασκήσουσιν οὕτως, οἳ οὐ μόνον αὐτοὶ εὐεξίας ἀμελοῦσιν, ἀλλὰ καὶ τῶν ἐπιμελομένων καταγελῶσι; πότε δὲ οὕτω πείσονται τοῖς ἄρχουσιν, οἳ καὶ ἀγάλλονται ἐπὶ τῷ καταφρονεῖν τῶν ἀρχόντων· ἢ πότε οὕτως ὁμονοήσουσιν, οἵ γε ἀντὶ μὲν τοῦ συνεργεῖν ἑαυτοῖς τὰ συμφέροντα ἐπηρεάζουσιν ἀλλήλοις καὶ φθονοῦσιν ἑαυτοῖς μᾶλλον η τοῖς ἄλλοις ἀνθρώποις, μάλιστα δὲ πάντων ἔν τε ταῖς ἰδίαις συνόδοις καὶ ταῖς κοιναῖς διαφέρονται, καὶ πλείστας δίκας ἀλλήλοις δικάζονται, καὶ προαιροῦνται μᾶλλον οὕτω κερδαίνειν ἀπ' ἀλλήλων ἢ συνωφελοῦντες αὑτούς, τοῖς δὲ κοινοῖς ὥσπερ ἀλλοτρίοις χρώμενοι, περὶ τούτων αὖ μάχονται καὶ ταῖς εἰς τὰ τοιαῦτα δυνάμεσι μάλιστα χαίρουσιν;*

(2) *Ὣς φάτο Σαρπηδών· ὁ δ' ἀνέσχετο μείλινον ἔγχος*
Τληπόλεμος· καὶ τῶν μὲν ἁμαρτῇ δούρατα μακρὰ
Ἐκ χειρῶν ἤϊξαν· ὁ μὲν βάλεν αὐχένα μέσσον
Σαρπηδὼν, αἰχμὴ δὲ διαμπερὲς ἦλθ' ἀλεγεινή·
Τὸν δὲ κατ' ὀφθαλμῶν ἐρεβεννὴ νὺξ ἐκάλυψεν.
Τληπόλεμος δ' ἄρα μηρὸν ἀριστερὸν ἔγχεϊ μακρῷ
Βεβλήκειν· αἰχμὴ δὲ διέσσυτο μαιμώωσα,
Ὀστέῳ ἐγχριμφθεῖσα, πατὴρ δ' ἔτι λοιγὸν ἄμυνεν.
Οἱ μὲν ἄρ' ἀντίθεον Σαρπηδόνα δῖοι ἑταῖροι
Ἐξέφερον πολέμοιο· βάρυνε δέ μιν δορυ μακρὸν
Ἑλκόμενον, τὸ μὲν οὔτις ἐπεφράσατ', οὐδ' ἐνόησεν
Μηροῦ ἐξερύσαι δόρυ μείλινον, ὄφρ' ἐπιβαίη,
Σπευδόντων· τοῖον γὰρ ἔχον πόνον ἀμφιέποντες.

(3) *ἐγὼ μὲν οὓς ἂν τῶν λόγων ἀλγῶ κλύων,*
Λαερτίου παῖ, τούσδε καὶ πράσσειν στυγῶ·
ἔφυν γὰρ οὐδὲν ἐκ τέχνης πράσσειν κακῆς,
οὔτ' αὐτὸς οὔθ', ὥς φασιν, οὑκφύσας ἐμέ.
ἀλλ' εἴμ' ἕτοιμος πρὸς βίαν τὸν ανδρ' ἄγειν
καὶ μὴ δόλοισιν· οὐ γὰρ ἐξ ἑνὸς ποδὸς
ἡμᾶς τοσούσδε πρὸς βίαν χειρώσεται.
πεμφθεὶς γε μέντοι σοὶ ξυνεργάτης ὀκνῶ
προδότης καλεῖσθαι· βούλομαι δ', ἄναξ, καλῶς
δρῶν ἐξαμαρτεῖν μᾶλλον ἢ νικᾶν κακῶς.

II. Give the stems, genit. sing., and accus. plur. of *ναύτης, ἅλως, φῶς, ἐλέφας, χείρ, κρέας, ἔρως, χαρίεις, πρᾶος, τάλας, μείζων.*

Decline throughout *ἡ τοιαύτη γυνή.*

Write down the positive, comparative, and superlative of the adverbs formed from *μέγας, χαρίεις, ταχύς, σαφής, ῥᾴδιος.*

Parse these verbs—*εφῆκε, ᾔσθετο, συνῆψαν, ἐδέδοκτο, ᾑροῦντο,* *ἐξέπλησε, ἀπαντώντων, ἑωσμένος, μέμνησο, ληφθείη, ἀναβῶσι, ἐνενόει, ὄψοιτο, μείνειαν.*

Write out the impf. indic. act. of *φιλῶ* (contracted forms), the imper. of *οἶδα*, the pres. indic. mid. of *ἵστημι*, the pres. indic. of *φημί*, and the 2nd aor. imper. act. of *ἵημι*.

III. What are the chief forms of conditional sentence in Greek?

IV. Translate into Greek :—

(1) I have long thought him most reliable (*πιστὸς*) in action, though a terribly slow speaker.

(2) Who has ever yet heard of a man being wholly free from the fear of death?

(3) He said that that was the happiest of all the days of his life : for he had that day received such honours, that he forgot all the toil and danger of the war.

(4) A certain philosopher who had declared all his life that pain was no evil, at last (*τελευταῖος*) was compelled by a sore disease to change his mind (*μεταγιγνώσκω*).

(5) If you wish to progress (*προβαίνω*), desire not to seem to know anything : be content (*ἀνέχω*) to appear to others foolish and silly, that you may live according to nature. Desire wisdom rather than reputation : and do not suppose that it is easy both to be really wise and to seem so.

ELEMENTARY GREEK.

Wednesday, 12*th October* 1892.—1 *to* 4 *o'clock.*

I. Translate :—

μετὰ δὲ τοῦτο ἤρξατο λόγου ὁ Φαρνάβαζος· καὶ γὰρ ἦν πρεσβύτερος· Ὦ Ἀγησίλαε καὶ πάντες οἱ παρόντες Λακεδαιμόνιοι, ἐγὼ ὑμῖν, ὅτε τοῖς Ἀθηναίοις ἐπολεμεῖτε, φίλος καὶ ξύμμαχος ἐγενόμην, καὶ τὸ μὲν ναυτικὸν τὸ ὑμέτερον χρήματα παρέχων ἰσχυρὸν ἐποίουν, ἐν δὲ τῇ γῇ αὐτὸς ἀπὸ τοῦ ἵππου μαχόμενος μεθ' ὑμῶν εἰς τὴν θάλατταν κατεδίωκον τοὺς πολεμίους. καὶ διπλοῦν ὥσπερ Τισσαφέρνους οὐδὲν πώποτέ μου οὔτε ποιήσαντος οὔτ' εἰπόντος πρὸς ὑμᾶς ἔχοιτ' ἂν κατηγορῆσαι. τοιοῦτος δὲ γενόμενος νῦν οὕτω διάκειμαι ὑφ' ὑμῶν ὡς οὐδὲ δεῖπνον ἔχω ἐν τῇ ἐμαυτοῦ χώρᾳ, εἰ μή τι ὧν ἂν ὑμεῖς λίπητε ξυλλέξομαι, ὥσπερ τὰ θηρία. ἃ δέ μοι ὁ πατὴρ καὶ οἰκήματα καλὰ καὶ παραδείσους καὶ δένδρων καὶ θηρίων μεστοὺς κατέλιπεν, ἐφ' οἷς εὐφραινόμην, ταῦτα πάντα ὁρῶ τὰ μὲν κατακεκομμένα τὰ δὲ κατακεκαυμένα.

In the above, parse these words :—*ἤρξατο, ὑμῖν, ἐγενόμην, διπλοῦν, ποιήσαντος, ἔχοιτ', κατηγορῆσαι, ὧν, λίπητε, κατακεκομμένα.*

II. Give the genitive and vocative singular, the dative and accusative plural of the nouns *μοῦσα, ναύτης, νεώς, νοῦς, ναῦς, θυγατήρ, ἱερεύς, ἄστυ, γέρας, Ἕλλην.*

Parse *ἥρω, θεράπουσι, βαρέε, ἀκούσῃς, χεῖρους, νῷν, σφᾶς.*

Decline throughout *ἡ σώφρων γυνή, τὸ μέγα ὄρος.*

Give the meaning and principal tenses of the verbs *φέρω, λαμβάνω, αἱρέω, αἴρω, κόπτω, ὁράω, ἀναβαίνω, ἀποστέλλω, συνίστημι, περιάπτω.*

Write down the comparative and superlative of these adjectives and adverbs :—*σώφρων, ἡδύς, φίλος, εὐρύς, ῥᾴδιος, μακρός, ἄνω, πολύ, αἰσχρῶς, ἐγγύς.*

What different cases do the prepositions *ἐπί, μετά, παρά, πρός,* and *ὑπὸ* govern, and what is their proper meaning with each case?

III. Translate into Greek :—

I heard him speaking many beautiful words.

When the disease was at its height (*ἀκμάζω*), ten thousand were dying every day.

He has sent a messenger, that you may know what has happened.

He says that you are to go away, and he will remain.

If these things are so, I shall depart as quickly as possible.

Thursday, 6*th April* 1893.—9 *to* 12 *o'clock.*

1. Translate :—

Παῖδες ἐμοὶ καὶ πάντες οἱ παρόντες φίλοι, ἐμοὶ μὲν τοῦ βίου τὸ τέλος ἤδη πάρεστιν· ἐκ πολλῶν τοῦτο σαφῶς γιγνώσκω· ὑμᾶς δὲ χρή, ὅταν τελευτήσω, ὡς περὶ εὐδαίμονος ἐμοῦ καὶ λέγειν καὶ ποιεῖν πάντα. ἐγὼ γὰρ παῖς τε ὢν τὰ ἐν παισὶ νομιζόμενα καλὰ δοκῶ κεκαρπῶσθαι, ἐπεί τε ἥβησα, τὰ ἐν νεανίσκοις, τέλειός τε ἀνηρ γενόμενος τὰ ἐν ἀνδράσι· σὺν τῷ χρόνῳτε προϊόντι ἀεὶ συναυξανομένην ἐπιγιγνώσκειν ἐδόκουν καὶ τὴν ἐμὴν δύναμιν, ὥστε καὶ τοὐμὸν γῆρας οὐδεπώποτε ᾐσθόμην τῆς ἐμῆς νεότητος ἀσθενέστερον γιγνόμενον, καὶ οὔτ' ἐπιχειρήσας οὔτ' επιθυμήσας οἶδα ὅτου ἠτύχησα. καὶ τοὺς μὲν φίλους ἐπεῖδον δι' ἐμοῦ εὐδαίμονας γενομένους, τοὺς δὲ πολεμίους ὑπ' ἐμοῦ δουλωθέντας· καὶ τὴν πατρίδα πρόσθεν ἰδιωτεύουσαν ἐν τῇ 'Ασίᾳ νῦν προτετιμημένην καταλείπω· ὧν τ' ἐκτησάμην οὐδὲν οἶδα ὅ,τι οὐ διεσωσάμην. νῦν δ' ἣν τελευτήσω, καταλείπω μὲν ὑμᾶς, ὦ παῖδες, ζῶντας οὕσπερ ἔδωσάν μοι οἱ θεοὶ γενέσθαι· καταλείπω δὲ πατρίδα καὶ φίλους εὐδαιμονοῦντας· ὥστε πῶς οὐκ ἂν ἐγὼ δικαίως μακαριζόμενος τὸν ἀεὶ χρόνον μνήμης τυγχάνοιμι ;

Parse : *τελευτήσω, προϊόντι, νεότητος, ἐπιθυμήσας, δουλωθέντας, ζῶντας.*

2. Translate into Greek :—

(1) Who are these that disturb (*κινέω*) the city with their words?
(2) The river is too deep for us to cross.
(3) He said that he would wait three days.
(4) When you see a man die happy, know that he has lived well.
(5) He thought that Cyrus was the wisest of all the kings he had seen.
(6) If you honour the older men (comparative of *γεραιός*), the younger will honour you.

3. Give the gender, gen. and voc. sing., and dat. plur. of: *δεσπότης, παρθένος, λαγώς, ποιμήν, ἡγεμών, ὄρνις, χάρις, νέκυς, ἱερεύς, γένος.*

Parse: *ἀγγέλω, γάλακτι, τριχός, κυσί, ἅς, ἀληθῆ, ἄφρον.*

Decline in full: *αὕτη ἡ γυνή, τὸ αὐτὸ ὄρος.*

Parse: *ἔδοξεν, καταβάς, ἀπεστράφη, ἀποστάντας, λαβόμενος, βαλεῖν, ἀπεκρίνατο, πεφυκέναι, παρόντα, ἐχρῆν,* and give the 1st pers. sing. fut., 2nd aor. and perf. indic. act. (where these forms are in use) of the verbs from which they come.

Write out 2nd aor. imperat. act. and aor. imperat. pass. of *βάλλω.*

Give the comparat. and superl. of *ὀρθός, σαφής, ἡδύς, ταχύς, παλαιός, σώφρων, σόφως, μάλα, ἔξω, πολλάκις.*

HIGHER MATHEMATICS.

Monday, 17th October 1892.—9 to 12 o'clock.

(*Candidates for a pass need not attempt more than* TEN *questions.*)

1. Prove that a triangle is determined when two sides and the contained angle are given.

On the sides AB, AC of a triangle ABC, squares $ALMB$, $APQC$ are described outwardly; show that CL is equal and perpendicular to BP.

2. When a parallelogram and a triangle are upon the same base and between the same parallels, the area of the parallelogram is double that of the triangle.

Through a point O within a triangle ABC, $A'B''$ is drawn parallel and like directed to AB; $B'C''$ parallel and like directed to BC; $C'A''$ parallel and like directed to CA; prove that the triangles $A'B'C'$, $A''B''C''$ are equal in area.

3. Prove the proposition which establishes the relation, in an obtuse-angled triangle, between the square on the side opposite the obtuse angle and the squares on the sides containing it.

$ALMB$, $APQC$ are squares described on the sides AB, AC of the triangle ABC, both outwardly or both inwardly, show that $CA^2+CM^2=BA^2+BQ^2$.

4. Draw a tangent to a circle from a given external point.

Through a given external point draw a straight line to cut a circle, so that the intercepted chord shall be equal in length to a given straight line.

5. Define the radical axis of two circles, and show that it is a straight line perpendicular to the line joining the centres of the circles.

With a given radius describe a circle to cut two given circles orthogonally.

6. Polygons composed of the same number of similar triangles similarly placed are similar.

If on the sides of any quadrilateral taken as diameters, circles are described, prove that they intersect on the diagonals in four points which are the vertices of a similar quadrilateral.

7. Prove that the rectangle contained by any two sides of a triangle is equal to the rectangle contained by the perpendicular on the third side from the opposite vertex, and the diameter of the circumscribing circle.

The sides of a cyclic quadrilateral are a, b, c, d; h is the diagonal which joins the intersections of a, d and b, c; and k is the other diagonal; show that $h/k=(bc+ad)/(ab+cd)$.

Show how to construct a cyclic quadrilateral whose sides shall be equal in length to four given lines.

8. Define the terms *homogeneous* and *symmetrical* as applied to algebraic functions. Show that the function

$$\left\{(z-x)^3-(x-y)^3\right\}/(y+z-2x)$$

is a symmetric function of x, y, z.

Expand in powers of x, $(1-ax+bx^2)^2(1-bx+ax^2)^2$.

9. Show that every integral quadratic function of x can be resolved into two linear factors:—

Find the factors of (1) $(x^4-y^4)^2+(x^2-y^2)^4$.

(2) $2xy+7x+6y+21$.

Show that $xy+yz+zx$ is a factor of the expression

$$(x^2-yz)(y^2-zx)+(y^2-zx)(z^2-xy)+(z^2-xy)(x^2-yz),$$

and find the other quadratic factor.

10. Find the G.C.M. of $x^3+(a+b)x^2+(ab+1)x+b$ and $bx^3+(ab+1)x^2+(a+b)x+1$.

Show that

$$\frac{a_1^3}{(a_1-a_2)(a_1-a_3)}+\frac{a_2^3}{(a_2-a_1)(a_2-a_3)}+\frac{a_3^3}{(a_3-a_1)(a_3-a_2)}$$
$$=a_1+a_2+a_3.$$

11. Find the condition that

$Ax^2+Bx+C=0$ and, $A'x^2+B'x+C'=0$ shall have the same solutions.

Solve the following:—

(α) $x/(x+a-b)-x/(x-a+b)=2b/x$.

(β) $x^3-y^3=702$; $x-y=6$.

12. Find the sums of the following series to n terms:—

$$1+2+3+\;.\;.\;.$$
$$1\cdot2+2\cdot3+3\cdot4+\;.\;.\;.+$$

The successive layers of a pyramidal pile of balls consist of equilateral triangles, and the number of balls in the side of each triangle exceeds by two the number in the side of the layer immediately above. If there are n layers, and the top consists of a single ball, find the number of balls in the pile.

13. Find the rationalising factors of $\sqrt{p}\pm\sqrt{q}$.

Simplify $\frac{1}{x-y}+\frac{1}{\sqrt{x}-\sqrt{y}}+\frac{1}{\sqrt[4]{x}-\sqrt[4]{y}}$.

If $u=\sqrt{p}+\sqrt{q}+\sqrt{r}$, $x=\sqrt{q}+\sqrt{r}-\sqrt{p}$, $y=\sqrt{r}+\sqrt{p}-\sqrt{q}$, $z=\sqrt{p}+\sqrt{q}-\sqrt{r}$; find the value of $1/x+1/y+1/z-1/u$.

14. Draw the graphs of $\tan\theta$ and $\tan 2\theta-\tan\theta$.

Show that $\tan\frac{\pi}{12}=2-\sqrt{3}$ and $\tan\frac{\pi}{24}=(\sqrt{3}-\sqrt{2})(\sqrt{2}-1)$.

15. Prove the following identities where $A+B+C=180°$:—

(1) $\frac{\sin 2B-\sin 2C}{\sin 2B+\sin 2C}=\frac{\tan(C-B)}{\tan A}$

(2) $\sin 2A+\sin 2B+\sin 2C=2\{\sin A+\sin B+\sin C\}$
$\times\{\cos A+\cos B+\cos C-1\}$.

Thursday, 6th April 1893.—1 *to* 4 *o'clock.*

[TEN *Questions only to be answered.*]

1. Triangles on the same base and between the same parallels are equal.

Give a construction for converting any plane polygon into a triangle of equal area.

2. In any triangle the square on the side opposite an acute angle is equal to the sum of the squares on the other two sides diminished by twice the rectangle contained by either of those sides and the projection on it of the other side.

In a trapezium the sum of the squares on the diagonals is equal to the sum of the squares on the non-parallel sides together with twice the rectangle contained by the parallel sides.

3. Show how to circumscribe a circle to a given triangle.

Show how to construct the circles which pass through two vertices of a triangle and touch a side. How many such circles are there?

4. Draw a tangent to a circle from a given external point.

Through a given external point draw a secant which shall cut off from the circle a segment containing a given angle.

5. Define similar figures, and show that triangles which are equiangular are also similar.

Three circles have a common chord PQ, any secant through P meets the circles in A, B, C; show that these points divide the secant in fixed ratios.

6. Show how to draw a tangent to a parabola through a given external point.

Given the focus of a parabola, a tangent, and a point on the curve, find the directrix.

7. The straight line at right angles to each of two intersecting straight lines in a plane, is at right angles to the plane.

In a given plane draw a straight line perpendicular to a given straight line in space.

8. Find directly the condition that x^3+px+q should be divisible (1) by $(x-a)$, (2) by $(x-a)^2$.

Find the real factors of $x^4-1-4(x-1)$; find also the two linear and the quadratic factor of

$$(x^2-yz)^2-(y^2-zx)(z^2-xy).$$

9. Find the greatest common measure of $(x-1)^2$, $(x^2-1)^2$, and x^7-7x+6.

Express as single fractions in their lowest terms

$$(1)\ \{(1-a^2)(1-b^2)-4ab\}/\{(1-a)(1-b)-2ab\}$$

$$(2)\ \frac{1}{(1+bc)^2-(b+c)^2}+\frac{1}{(1+ac)^2-(a+c)^2}+\frac{1}{(1+ab)^2-(a+b)^2}.$$

10. Find a rationalising factor for $\sqrt{3}-1$, and also for $\sqrt[3]{3}-1$.

Find the value of $\{\sqrt{a^2+x^2}+x\}/\{\sqrt{a^2+x^2}-x\}$ when x is equal to $(b-c)a/2\sqrt{bc}$.

11. Find the limits within which m must lie in order that the roots of the equation $x^2-4(m-1)x+(m-1)(m-2)=0$ may both be real.

Solve the equations

$$(1)\ (x+a)^2/(x+b)^2=(2x+a+c)/(2x+b+c).$$

$$(2)\qquad x+y=a,\ x^3+y^3=ab^2.$$

12. Find the sum (1) of n successive integers, (2) of the squares of the same integers.

Show that the sum of all the products in a multiplication table going up to n times n is $\frac{1}{4}n^2(n+1)^2$.

13. Find an expression for all the angles which have a given sine, and show in any manner that $\sin 18^\circ \sin 54^\circ = 1/4$.

Find all the solutions of the equation

$$1/\sin\theta=1/\sin 2\theta+1/\sin 3\theta.$$

14. If one angle of a triangle be 60°, and the sides which contain it as 19 : 1; find the other two angles, given

$$\log 3=\cdot 47712313\quad L\tan 57^\circ,\ 19',\ 11''=10\cdot 1928032.$$

15. Find an expression for $\tan\frac{1}{2}A$ in terms of the sides of the triangle ABC. Show that

$$(b+c-a)\tan\tfrac{1}{2}A=(c+a-b)\tan\tfrac{1}{2}B=(a+b-c)\tan\tfrac{1}{2}C.$$

If r, r_1, r_2, r_3 be the radii of the inscribed and escribed circles of the triangle, show that

$$\tan^2\frac{A}{2}=(r_1-r)/(r_2+r_3)=rr_1/r_2r_3.$$

HIGHER GEOMETRY FOR JOHN WELSH MATHEMATICAL BURSARIES AND FOR HERIOT BURSARIES.

Tuesday, 18*th October* 1892.—9 *to* 12 *o'clock.*

1. Prove that the medians of a triangle are concurrent.

Given one side of a triangle and the length of the medians to the other two sides, construct the triangle.

2. Draw a common tangent to two given circles.

Draw a straight line to cut two given circles, so that the intercepted chords may be equal in length to two given straight lines.

3. Show that the centres of the inscribed and escribed circles of a triangle lie, two and two, upon the bisectors of the interior and exterior vertical angles of the triangle.

Given the base of a triangle, and the circumscribing circle; find the locus of the centre of the inscribed circle.

4. The rectangle under the diagonals of any quadrilateral (not cyclic), is less than the sum of the rectangles, under its opposite sides.

On the base BC of a triangle ABC, on the side remote from A, an equilateral triangle BDC is described. AD meets the circle circumscribing BDC in P; show that the sum of the distances of P from A, B, C is a minimum.

5. Find the locus of the centre of the circle which cuts two given circles orthogonally.

Describe a circle which shall pass through two given points, and cut a given circle orthogonally.

6. Prove that if any point be taken on the circle circumscribing a triangle, its projections on the sides of the triangle lie on a straight line, (the pedal line).

Find two points on the circumference of a circle, so that their pedal lines with respect to a given inscribed triangle, may be inclined at a given angle, less than the greatest angle of the triangle.

7. Show that a straight line inverts into a circle passing through the centre of inversion.

Invert the theorem in the previous question.

8. If the points X, Y, Z, lying respectively on the sides BC, CA, AB of a triangle ABC, are collinear, then $(AZ:ZB)(BX:XC)(CY:YA)=1$.

In a triangle ABC, X and X' are harmonic conjugates with respect to B and C; Y and Y' are harmonic conjugates with respect to C and A; Z and Z' are harmonic conjugates with respect to A and B. Show that if X, Y, Z are collinear, so also are X', Y', Z; Y', Z', X; Z', X', Y.

9. Pencils whose rays pass through four fixed points on a circle, and whose vertices lie on the circle, have equal cross ratios.

Extend the theorem to conics, and find the locus of the vertices of pencils having equal cross ratios, whose rays pass through four fixed points.

10. The locus of the projection of the focus of a parabola upon any tangent is a straight line.

O is a fixed point, and P, Q two variable points on the circumference of a fixed circle; show that if the sum of the squares on OP and OQ is constant, the middle point of PQ will lie on a fixed line, and the line PQ will touch a parabola.

11. The tangents drawn from any point to an ellipse are in the ratio of parallel radii.

Ellipses are inscribed in a rectangle, show that the chords of contact form parallelograms of constant perimeter.

12. Prove that the volume of a tetrahedron is one-third of the prism upon the same base and with the same altitude.

A regular octohedron is formed by joining the middle points of the faces of a cube, compare its volume with that of the cube.

ELEMENTARY MATHEMATHICS.

Thursday, 13*th October* 1892.—9 *to* 12 *o'clock.*

1. The greater angle in any triangle has the greater side opposite to it.

In any triangle ABC, D is a point in BC; prove that AD is less than the greater of the two sides AB, AC.

2. The square described on the hypotenuse of a right-angled triangle is equal to the squares described on the other two sides.

Construct a square equal (1) to the sum of three given squares, (2) to the difference of two given squares.

3. The rectangle contained by the sum and difference of two lines is equal to the difference of the squares on the lines.

In a trapezium the two non-parallel sides are equal; show that the difference of the squares on either diagonal and on either of the equal sides is equal to the rectangle contained by the parallel sides.

4. In a circle equal chords are equally distant from the centre, and chords which are equally distant from the centre are equal.

Through a given point within a circle draw the shortest chord.

5. In a circle the tangent at any point is at right angles to the radius drawn to that point.

Given the radius of a circle, find its centre when it passes through a given point and touches a given straight line.

6. Expand in powers of x :—$(1-x+x^2)^2$.

Expand the product :—$(x^2-yz)(y^2-zx)(z^2-xy)$.

7. Find by actual division the condition that x^2-px+q shall be divisible by $x-a$.

Resolve into factors :—

(1) $x^2y^2-4xy+21$.
(2) $(1+x)^2(1+y^2)-(1+y)^2(1+x^2)$.

8. Find the G.C.M. of x^4+x^2+1 and $(x+1)^4+(x+1)^2+1$.

Reduce to a single fraction in its lowest terms :

$$\frac{1}{x^2-3x+2}-\frac{2x}{x^2-4x+3}+\frac{1}{x^2-5x+6}.$$

9. Solve the equations :

$$(1)\ \frac{(x+a)(x+b)}{x+a+b}=\frac{(x+c)(x+d)}{x+c+d}.$$

$$(2)\ x+y=1\ ;\ z+x=2\ ;\ y+z=3.$$

10. Solve the equation

$$100=100x-16x^2.$$

Divide a straight line of given length into two parts so that the su of the squares on the two parts may be equal to three times the rectangle contained by the parts.

Monday, 3rd *April* 1893.—1 *to* 4 *o'clock.*

1. If two sides and the contained angle of one triangle be equal to two sides and the contained angle of another triangle, the two triangles shall be equal in every respect.

From the vertices of an equilateral triangle ABC equal lengths AR, BP, CQ are measured along the sides AB, BC, CA respectively. Show that the triangle PQR is also equilateral.

2. In any right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the other sides.

In a right-angled triangle, one of the acute angles is double of the other ; prove that the square on the side opposite the greater angle is three times the square on the side opposite the lesser angle.

Construct a square which shall be equal to one-third of a given square.

3. The straight line AB is bisected at C and produced to D; show that the rectangle contained by AD, BD is equal to the difference of the squares on CD and AC.

Show also that four times the rectangle contained by CD and AC is equal to the difference of the squares on AD and BD. Enunciate a proposition which shall include both the above theorems.

4. If a straight line drawn through the centre of a circle bisect a chord which does not pass through the centre it shall cut it at right angles, and if it cut it at right angles it shall bisect it.

In a given circle draw a chord parallel to a given straight line so that its middle point may lie on a given chord.

5. When two circles touch externally the line joining their centres passes through the point of contact.

Given the radius of a circle, show how to find its centre when it passes through a given point and touches a given circle.

6. Multiply 23·08 by 3·5471638 correctly to three decimal places.

A cubic centimetre of water weighs a gramme; a metre is equal to 39·3704 inches, and a lb. is equal to ·4536 kilogrammes. Find how many cubic feet of water weigh a ton.

7. Find the true discount on £1000 for 9 months at 4 per cent. per annum.

A sum of £2000 is borrowed and is to be paid back in two years by two equal annual payments, allowing 5 per cent. simple interest. Find the annual payment.

8. Find the co-efficient of x^4 in the expansion of $(1-x+x^2)^3$.

Expand the product

$$(a+b-2c)(b+c-2a)(c+a-2b).$$

9. Find the G.C.M. of x^6-6x+5 and x^3-3x+2.

Factorise the expressions

(i) $x^2+9x-52$ (ii) $xy+8x-7y-56$ (iii) $(1+xy)^2-(x+y)^2$.

10. Reduce to single fractions in their lowest terms

$$\text{(i)}\ \frac{1}{x^2-3x+2}-\frac{1}{x^2+2x-3}+\frac{1}{x^2+x-6}.$$

$$\text{(ii)}\ \frac{(1+xy)^2-(x+y)^2}{(1+x)(1+y)}+\frac{(1-xy)^2-(x-y)^2}{(1-x)(1-y)}.$$

11. Solve the following equations

$$\text{(i)}\ \frac{x-a}{x-b}=\frac{x-2a+b}{x-2b+a}.$$

(ii) $3x+5y=1,\ 7x+9y=1$.

12. Solve the equations

$$(1)\ (x-1)(x-2)+(x-2)(x-3)=2.$$

$$(2)\ x-y=1\ ;\ xy=2.$$

Divide a straight line into two parts such that the difference of the squares on the parts may be equal to the rectangle contained by the parts. Discuss the two analytical solutions.

FRENCH.

Friday, 14*th October* 1892.—9 *to* 12 *o'clock.*

I. Translate into English:—

1. Henri IV., considéré comme prince, sera toujours le modèle des rois, et la postérité se plaira à lui perpétuer le surnom de Grand qu'il a si bien mérité. Dans tout le cours de son règne il a prouvé qu'il était réellement le père de son peuple. Il unissait à une extrême franchise la plus adroite politique; aux sentiments les plus élevés une simplicité de moeurs admirable; et à un courage de soldat un fonds d'humanité inépuisable. Tout en lui était l'expression de sa beauté d'âme. Souvent il se familiarisait avec les soldats et le peuple, de manière à n'en être que plus respecté; tantôt assis dans un corps de garde, il mangeait un

morceau de pain noir, pour inspirer aux troupes la patience ; tantôt il consolait les paysans des misères causées par la Ligue, en leur témoignant qu'il les partageait avec eux. Sa grande ambition était de rendre ses sujets heureux. Le duc de Savoie lui demandant un jour ce que la France pouvait lui valoir de revenu : "Elle me vaut ce que je veux," lui dit-il ; "oui, ce que je veux ; parce qu'ayant le coeur de mon peuple, j'en aurai ce que je voudrai. Si Dieu me donne la vie, je ferai qu'il n'y aura point de paysan dans mon royaume qui n'ait moyen d'avoir une poule dans son pot ; aussi," ajouta-t-il fièrement, "je ne laisserai pas d'entretenir des gens de guerre, pour mettre à la raison tous ceux qui choqueront mon autorité." La bonté de Henri ne dégénerait point en une molle complaisance. Il savait refuser à propos, et faire goûter la justice de ses refus. Un homme de condition lui demanda grâce pour son neveu, coupable d'un meurtre. Sa réponse fut celle d'un prince qui voudrait pardonner, mais qui ne peut s'empêcher de punir. "Je suis bien marri (=fâché)," lui dit-il, "de ne pouvoir accorder ce que vous demandez. Il vous sied bien de faire l'oncle, et à moi de faire le roi. J'excuse votre requête ; excusez mon refus."

DES CARRIÈRES.

2. Quoi ! tu veux être roi, Cromwell ! Y penses-tu ?
Ne crains-tu pas qu'un jour, d'un crêpe revêtu,
Ce même White-Hall, où ta grandeur s'étale,
N'ouvre encore une fois sa fenêtre fatale ?—
Tu ris ! mais dans ton astre as-tu donc tant de foi ?
Songe à Charles Stuart ! Souviens-toi ! souviens-toi !
Quand ce roi dut mourir, quand la hache fut prête,
C'est un bourreau voilé qui fit tomber sa tête.
Roi, devant tout son peuple il périt sans secours,
Sans savoir seulement qui dénouait ses jours.
Par le même chemin tu marches à ta perte,
Cromwell, d'un voile aussi ta fortune est couverte.
Crains qu'elle ne ressemble à ce spectre masqué,
Qui sur un échafaud paraît au jour marqué !

VICTOR HUGO.

II. Translate into French :—

The famous French writer, Le Sage, the author of "The Adventures of Gil Blas of Santillane," also produced, amongst other works, a comedy entitled Turcaret. This play was intended to expose the odious rapacity of the Farmers-general or financiers, who grew rich by the basest means and most cruel exactions. These men, understanding what was the object of the new piece, used all their interest against it, and succeeded in delaying its performance for a time ; but at last it was acted with great success. A few days before the first performance, the poet consented to read his play before a select party at the Hôtel de Bouillon, but, being detained by a lawsuit, he appeared rather late, and when he endeavoured to apologise, the Duchess de Bouillon heard him with haughty coldness, observing that he had made her guests lose

two hours. "Oh, 'tis easy to make up the loss, madam," replied Le Sage, "I will not read my comedy, and thus you will regain the lost time." He left the hotel, and could never be persuaded to enter the duchess's house again.

III. 1. Give the meaning and feminine of *leur beau-frère*, *mon vieux grand-père*, *un serviteur attentif*, *ce lion cruel*, *il était tout troublé*, *tout heureux qu'il était*. State the rule as to the treatment of *tout* in the last two examples.

2. Give meaning and plural of *cet oiseau bleu*, *tout bel-esprit*, *son chef-d'oeuvre*, *un chevau-léger*, *un gentilhomme loyal;* and the singular and meaning of *vos beaux yeux*, *ce sont eux-mêmes.*

3. Give 3rd singular and plural present, past definite and future of *conquérir*, *s'asseoir*, *poursuivre*, *proscrire*, *défaire*, *décevoir*.

4. Write out the imperative of *s'en aller*, both positively and negatively.

5. Show how English gerundial expressions with prepositions—such as, *in going there*, *on seeing him*, *before doing this*, *after dining*, *without knowing it*—are turned into French.

6. *Je me'n plains—je m'y suis attendu:* state why *en* and *y* are used here, and not *le;* and give two other reflective verbs of each kind.

7. Translate idiomatically :—

a. He had just seen him.
b. You ought to have spoken to him.
c. I was going to write to you.
d. I fear he will come.
e. I fear he will not come.
f. I doubt that he has done it.
g. Do you doubt that he has done it?
h. This is the best book I know.

8. Account for the circumflex of *sûr*, *mûr*, *jeûne*, *finît*, *il paraît*, *la tâche*, *le pêcheur*.

9. Explain etymologically the *t* in *ira-t-il*, *aime-t-il;* the *s* in *donnes-en;* the *b* in *chambre;* the *d* in *tiendra*, *gendre;* the *l* in *et l'on sait*. . .

10. Give the names of three distinguished French dramatists, three lyric poets, and three novelists; and mention some of their works.

FIRST PAPER.

Tuesday, 4th April 1893.—9 *to* 10.30 *o'clock.*

1. Translate into French :—

As soon as the retreating troops appeared—that disorderly mob of exhausted soldiers, dragging their legs behind them—the inhabitants of the village bestirred themselves and prepared for flight. They who had been so peaceful a fortnight before—all that Alsace, which awaited the war with a smile, convinced that the fighting would take place in Germany! And now France was invaded; it was at *their* doors, round *their* houses, in *their* fields that the tempest was bursting, like one of those frightful hurricanes of hail and lightning which destroy a whole province in an hour or two! In front of their doors, in the midst of wild confusion, the men were loading the vehicles, piling up the furniture, at the risk of smashing everything. Up above, the women were throwing out of window a last mattress, or handing down a cradle which had been forgotten. Those who had no waggon were throwing their household goods on to a wheelbarrow (*brouette*), others were making off with a bundle of clothing in their arms, whilst others again had thought only of saving a clock, which they pressed against their bosoms as if it were a child. It was impossible to take away everything, and so deserted furniture and heaps of family linen, too heavy for removal, were left lying in the gutters. Some, before leaving, had closed everything up; the houses looked as if dead, with doors and windows fastened, but the majority in their haste, in the horrible certainty that everything would be wrecked, were leaving their wretched dwellings quite open—windows and doors gaping (*béantes*) upon the emptiness of the dismantled rooms—and these were the saddest of all.

2. Translate, idiomatically, *any eight* of the following :—

(*a*) It is very good of you to have come so early.
(*b*) You have come much earlier than I had expected.
(*c*) Silk is cheaper here than anywhere else in Europe, except France.
(*d*) It would be better to give him some of it at once.
(*e*) You must give him neither too much nor too little of it.
(*f*) Bring your friend to my house to-morrow when you come.
(*g*) I have looked for him everywhere, but I have not been able to find him anywhere.
(*h* and *i*) They have been here for a month at least (*two forms*).
(*j*) No one has been here, at least so far as I know.
(*k*) He looked as if he had just recovered from a long illness.

SECOND PAPER.

Tuesday, 4*th April* 1893.—10.30 *to* 12.30 *o'clock.*

I. Translate into English :—

1. Peu de temps après, le préfet de Genève fut destitué (*dismissed*), et l'on crut assez généralement que c'était à cause de moi. Il était de mes amis, néanmoins il ne s'était pas écarté des ordres qu'il avait reçus. Bien que ce fût un des hommes les plus honnêtes et les plus éclairés de France, il entrait dans ses principes d'obéir sans scrupule au gouvernement qu'il servait ; mais aucune vue d'ambition, aucun calcul personnel ne lui donnaient le zèle requis. Ce fut encore un grand chagrin pour moi que d'être, ou de passer pour, la cause de la destitution d'un tel homme. Il fut généralement regretté dans son département, et dès qu'on crut que j'étais pour quelque chose dans sa disgrâce, tout ce qui

prétendait aux places s'éloigna de ma maison, comme on fuit une contagion funeste. Il me restait toutefois à Genève plus d'amis qu'aucune autre ville de province en France ne m'en aurait offert ; car l'héritage de la liberté a laissé dans cette ville beaucoup de sentiments généreux ; mais on ne peut se faire une idée de l'anxiété qu'on éprouve quand on craint de compromettre ceux qui viennent nous voir. Je m'informais avec exactitude de toutes les relations d'une personne, avant de l'inviter ; car si elle avait seulement un cousin qui voulût une place, ou qui la possédât, c'était demander un acte d'héroïsme romain que de lui proposer seulement à dîner. Enfin, au mois de mars 1811, un nouveau préfet arriva de Paris. C'était un de ces hommes supérieurement adaptés au régime actuel. La première fois que je le vis, il me dit tout de suite qu'un talent comme le mien était fait pour célébrer l'empereur, que c'était un sujet digne du genre d'enthousiasme que j'avais montré dans *Corinne.* Je lui répondis que, persécutée comme je l'étais par l'empereur, toute louange de ma part, adressée à lui, aurait l'air d'une requête, et que j'étais persuadée que l'empereur lui-même trouverait mes éloges ridicules dans une semblable circonstance. Il combattit avec force cette opinion ; il revint plusieurs fois chez moi pour me prier, au nom de mon intérêt, disait-il, d'écrire pour l'empereur, ne fût-ce qu'une feuille de quatre pages : cela suffirait, assurait-il, pour terminer toutes les peines que j'éprouvais.

MADAME DE STAËL, *Dix années d'exil.*

2. Quand l'été vient, le pauvre adore !
L'été c'est la saison de feu,
C'est l'air tiède et la fraîche aurore :
L'été c'est le regard de Dieu.

L'été, la nuit blanche et profonde
S'unit au jour limpide et clair ;
Le soir est d'or, la plaine est blonde ;
On entend des chansons dans l'air.

L'été, la nature éveillée
Partout se répand en tous sens,
Sur l'arbre en épaisse feuillée,
Sur l'homme en bienfaits caressants.

VICTOR HUGO.

II. (*Only* FIVE *of the following six questions to be attempted.*)

1. (*a*) Give the third person singular and plural of the present, past definite and future indicative of *tracer*, *bouger*, *blaguer*, *plier*, *déployer*, *pouvoir*, *vivre*, *savoir*, *tendre*, *teindre*, *tenir*, *prendre.* (*b*) Give the present and past participles of these verbs.

2. Write out the present, past definite, future and future perfect indicative of *se fâcher*, the first two tenses interrogatively, the others

negatively-interrogatively. In the future perfect treat the pronouns as feminine.

3. Distinguish between—Dans un mois, en un mois ; il vient la voir, il vient de la voir ; vers, un vers, un ver, vert ; il me tarde de le voir, il ne tardera pas à venir ; une histoire vraie, une vraie histoire ; encore du potage, plus de potage ; il a réparti, il a reparti, il est reparti ; une parti de cartes, un jeu de cartes ; épouser une demoiselle, marier une demoiselle.

4. Give the French for—The elder son, the younger son ; the upper lip, the lower lip ; the Upper Rhine, the Lower Rhine ; blind, blindness ; sad, sadness ; sweet, sweetness ; good, goodness ; black, to blacken ; hard, to harden ; red, reddish ; dark blue, light blue ; a light task, the light of the sun, moonlight, by the light of a candle, to light a fire.

5. Write out the whole of *y avoir*, giving all tenses, simple and compound ; the subjunctive tenses to be given negatively, and the others first interrogatively, then negatively-interrogatively.

6. (*a*) Give the plurals of—*Aïeul*, *ciel*, and *œil*, and show by examples how they are used. (*b*) Give the rule for the formation of the plural of compound nouns ; (1) when composed of two nouns ; (2) when composed of a noun and a verb ; (3) when composed of verbs and uninflected words. Give an example of each rule, and one exception to each of the two former rules.

III. (*Only* ONE *of the three following questions to be attempted by each candidate.*)

1. Give the names of the authors of the following works, and state as nearly as possible when they lived : La vie de Gargantua, Le Cid, La Henriade, L'Esprit des Lois, Le Misanthrope, Athalie, Les Misérables, Paul et Virginie, Corinne, Consuelo, Lettres Provinciales, Télémaque.

2. Give the modern French form of the following Latin words : Diurnum cumulum, captivum, sponsum, jocum, apothecam, vivenda, audire, jacēre, vado (*verb*), ibi, inde.

3. (*a*) Give three French words illustrating the survival of the Latin nominative case alone. (*b*) Three words in which both the nominative and accusative cases survive ; give both forms. (*c*) Are there any traces of the Latin genitive in French ? Give illustrations.

GERMAN.

Friday, 4*th October* 1892.—1 *to* 4 *o'clock.*

I. Translate into English :—

1. Als ich eines Tages am Ufer des Inn durch das Engadinthal wanderte und von der Nacht überraſcht wurde, kehrte ich in dem Hauſe eines Bauern ein, das in kleiner Entfernung vom Ufer des Fluſſes im Schutze eines Felſen lag, von beiden Seiten durch uralte Nußbäume beſchattet, die

rundum bis an die Zweige hinauf mit üppigem Epheu umſponnen waren. Vor dem Hauſe breitete ſich der freundliche Hofraum aus, in deſſen Hintergrunde eine dichte Laube von Weinreben beinahe die ganze Vorderwand des einſtöckigen Hauſes einnahm. Hier ſaß der Eigentümer des Hauſes auf der hölzernen Bank, der Hofhund zu ſeinen Füßen, ein ſpinnendes Mädchen an ſeiner Seite; in einiger Entfernung ein Knabe, der an einem Netze arbeitete. Als ich zur Hofthür eintrat, erhob ſich der Hund, ſah mit vorgeſtrecktem Kopfe nach mir hin und bellte einigemal, aber ſo leiſe, daß man wohl ſah, er wolle nur das herkömmliche Zeichen geben, wie ſeine Pflicht war. Auch mir war das ein gutes Zeichen, und ich dachte augenblicklich an das Wort eines alten Dichters, daß man beim Eintritt in ein Haus gleich aus der Weiſe des Hundes die Aufnahme beurteilen könne. Auch diesmal täuſchte das Anzeichen nicht. Ich wurde auf das freundlichſte begrüßt, in das Haus geführt, mit Speiſe und Trank reichlich bewirtet und endlich in ein Bett gebracht, geräumig genug, um noch drei andere, wäre es nötig geweſen, aufzunehmen. Da war es mir fürwahr, als wäre ich in die Zeit zurückverſetzt, wo die Hausväter an der Straße ſaßen und, wenn ein Wanderer vorüberzog, ihn unter ihr Dach einluden und an ihrem Herde bewirteten, ohne auch nur zu fragen, wo er herkäme, was er für Geſchäfte treibe, und wie lange er zu weilen gedenke. Gerade ſo wie ich trat ja Ulyſſes unerkannt in den Hof des Eumäus, ſeines alten Dieners.

F. JACOBS.

2. Die Pfauenfeder.

Ich ſah mit Staunen und Vernügen
Eine Pfauenfeder (Pfau = *peacock*) im Bibelbuch liegen:
Willkommen an dem heil'gen Platz,
Der Erdgebilde höchſter Schatz!
An dir, wie an des Himmels Sternen,
Iſt Gottes Größe im Kleinen zu lernen,
Daß er, der Welten überblickt,
Sein Auge hier hat aufgedrückt
Und ſo den leichten Flaum geſchmückt,
Daß Könige kaum unternahmen,
Die Pracht des Vogels nachzuahmen.
Beſcheiden freue dich des Ruhms,
So biſt du wert des Heiligtums.

GOETHE.

II. Translate into German :—

The separation of friends and families is, perhaps, one of the most distressful circumstances attendant on penury. The day soon arrived on which we were to disperse for the first time. My son, after taking leave of his mother and the rest, who mingled their tears with their kisses, came to ask my blessing (Segen, m.). This I gave him from my

heart, and which, added to five guineas, was all the patrimony I had now to bestow. "You are going, my boy," cried I, "to London on foot, in the manner (add, *in which*) Hooker, your great ancestor, travelled there before you. Take from me the same horse that was given him by the good Bishop Jewel, this staff; and take this book, too, it will be your comfort on the way; these lines in it are worth a million,—I have been young, and now am old; yet never saw I the *righteous man* (Gerechte, m.) forsaken, nor his seed (Samen, m.) begging their bread. Let this be your consolation as you travel on. Go, my boy, whatever be thy fortune, let me see thee once a year; still keep a good heart, and farewell!" GOLDSMITH, *The Vicar of Wakefield.*

III. 1. Give the German words in the nominative and genitive singular, and nominative plural, with the definite article—for any TEN of these—*country*, *lake*, *school*, *pupil*, *picture*, *map*, *volume*, *battle*, *glove*, *nephew*, *niece*, *question*, *answer*, *duty*, *virtue*, *vice.*

2. Decline the German for:—*my good old friend*, and *The German Emperor William the First.*

3. Give the 3rd singular and plural present, imperfect and perfect indicative active of beſehen, entnehmen, angeben, durchgehen, mißverſtehen, ſtudieren, verlaſſen; and the 2nd singular imperative of ausſprechen, vernehmen, vorleſen.

4. Give three abstract nouns formed with each of these suffixes:—heit, keit, nis, ſchaft.

5. Give three adjectives formed with each of these suffixes:—ig, lich, bar, ſam, haft.

6. Illustrate by examples the the government of the prepositions:—ungeachtet, vermittelſt, trotz, nebſt, ſeit, außer.

7. Distinguish between:—die Güte, die Güter; die Reiſen, die Reiſer, die Rieſen; beſtändig, verſtändig, geſtändig; er bot, er bat; der Thor, das Thor.

8. Translate idiomatically:—

a. He came riding.
b. I have broken my arm.
c. My head aches.
d. You ought to have done it.
e. He went away without seeing me.
f. Yesterday fortnight.
g. To-morrow week.
h. You will have to do it sooner or later.

9. Give the German *etymological* equivalents (with the definite article in the case of nouns) for any TEN of these:—*head*, *even*, *deaf*, *chin*, *hearth*, *crow*, *fowl*, *slight*, *bleak*, *sly*, *horse*, *weak*, *to lead*, *hoarse*, *to read.*

10. Give the names of three distinguised German dramatists, three lyrical poets, and three novelists; and mention some of their works.

FIRST PAPER.

Tuesday, 4th April 1893.—1.30 *to* 3 *o'clock.*

1. Translate into German :—

As the first man in the state, Frederic wished to be also the busiest, and to this he was impelled both by nature and inclination. "You are quite right," he once wrote to Jordon, "when you believe that I work a great deal. I do this in order to live, for nothing so much resembles death as idleness." But his work was no mere confused, purposeless activity. The spirit of order, directed (walten über) his most trifling occupations. His plan of life, drawn up (entwerfen) in his early days, remained to the end unchanged. Almost every hour of his life had its exact task. "Defer nothing" was his fixed principle, from which neither fatigue, nor bad weather, nor personal inclination could divert (abbringen) him. In summer he was out of bed as early as four in the morning; on days on which a review (Muſterung) was held, he was at this hour already on horseback. From the moment when he left his bed until he lay down again to sleep he wore his soldier's boots. His first movement (Gang) was towards his writing-desk, where he found the letters which had arrived during the night. The more important he read himself; of the others his Secretaries had to make short summaries (Abriß). Then he heard the reports of his Adjutants, gave his orders, drank a cup of coffee, and began with his flute.

2. Translate, idiomatically, *any eight* of the following :—

(*a*) What day of the month is this?
(*b*) I have not been able to do as much as I had hoped.
(*c*) This book is beautifully printed.
(*d*) All the best books are printed here.
(*e*) He has had his book printed in London.
(*f*) He has lost all that you gave him.
(*g*) You must go to the country to-morrow.
(*h*) You must not stay there long.
(*i*) He is said to be a relation of the late Professor A.
(*j*) I should like very much to go to Italy.
(*k*) I would rather go to France if I had the choice.
(*l*) What is your opinion about such things?

SECOND PAPER.

Tuesday, 4th April 1893.—3 *to* 5 *o'clock.*

I. Translate into English :—

1. Der Herbſt war nun Herr im Lande. Regen und Sturm, Sturm und Regen einen Tag wie den andern. Die Sonne war verſchwunden, als

wollte Sie die Verwüſtung nicht ſehen; nicht ſehen, wie die Felder, welche noch vor kurzem in goldenen Ähren wogten, eine weite, troſtloſe, ſumpfige Öde waren, wie die Blumen im Garten umgeknickt und umgebrochen an dem naſſen Boden verrotteten, die halbkahlen Äſte der Bäume wie im Wahnſinn durcheinanderfuhren und die dürren Blätter wie toll in der Luft herumwirbelten. Von den Tieren hatte ſich verkrochen, was nur irgend Schutz finden konnte; in dem Park war kein Vogellaut zu hören, als das jetzt faſt ununterbrochene Krächzen der Krähen, die der Sturm aus den Neſtern und von den ſchwanken Zweigen ſchüttelte und hoch oben zwiſchen den graulichen Nebeln wie ſchwarze Flocken hin und her ſchleuderte. Die Atmoſphäre war mit feuchtkaltem Waſſerdunſt getränkt. Von Zeit zu Zeit fiel ein dichter, eiſiger Regen, welcher die Strohdächer durchweichte, den Putz (plaster) von den Scheunen und Bauernhäuſern herunterſchlug und nach und nach den hellen freundlichen Bach, der das Dorf durchplätſcherte, und von dem es ſeinen Namen hatte, in einen Strom verwandelte, der ſeine dunklen, ſchmutzigen Fluten wie in lautem Zorn dahinwälzte. Es war eine traurige, trübe Zeit—nicht zum mindeſten trübe und traurig für die Bewohner des Hofes. Das alte Herrenhaus mit ſeinem überhängenden Dache, den ſtets verſchloſſenen Jalouſieen und den kahlen, ſchmuckloſen Wänden, welchen Sturm und Regen übel genug mitgeſpielt hatten, glich einem Manne, der beſſere Tage geſehen hat, und nun den Hut ins Geſicht zieht, den Rock feſt zuknöpft und dem Unglück Trotz bietet. Und ſo öde und freundlos, wie das Äußere ſeines Hauſes, war auch das Leben des Herrn von Weißenbach.

F. SPIELHAGEN.

2.

Wem Gott will rechte Gunſt erweiſen,
Den ſchickt er in die weite Welt;
Dem will er ſeine Wunder weiſen
In Berg und Wald und Strom und Feld.

Die Trägen, die zu Hauſe liegen,
Erquicket nicht das Morgenrot,
Sie wiſſen nur von Kinderwiegen,
Von Sorgen, Laſt und Not um Brod.

Die Bächlein von den Bergen ſpringen,
Die Lerchen ſchwirren hoch vor Luſt,
Was ſollt' ich nicht mit ihnen ſingen
Aus voller Kehl' und friſcher Bruſt?

Den lieben Gott laß ich nur walten;
Der Bächlein, Lerchen, Wald und Feld
Und Erd' und Himmel will erhalten,
Hat auch mein' Sach' aufs beſt' beſtellt.

EICHENDORFF.

(*Only five of the following eight questions to be attempted.*)

II. 1. Give the German words, with the definite article, for any *ten* of the following; give also the genitive singular and nominative plural:—*Dog*, *lion*, *son*, *sun*, *star*, *bride*, *art*, *student*, *leaf*, *ear*, *spark*, *carriage*, *song*, *hammer*, *month*, *shirt*, *visit*, *thread*, *forest*, *merchant*.

2. Write out the present and imperfect indicative and subjunctive of—nehmen, lohnen, tragen, nennen, and give their past participles.

3. In the case of the following words give the synonymous and secondary words from which the plural is supplied, and give that plural:—Betrug (*fraud*), Kummer (*sorrow*), Lob (*praise*), Lohn (*reward*), Raub (*robbery*), Streit (*dispute*), Troſt (*consolation*), Tod (*death*), Unglück (*misfortune*), Verzug (*delay*).

4. *a.* From gehen (to go) form compounds signifying—(*a*) to escape, (*b*) to concern, (*c*) to perish, (*d*) to dissolve, (*e*) to go to meet, (*f*) to deceive, (*g*) to commit (a crime, etc.), (*h*) an offence.

b. From geben (to give), and Gabe (a gift) form compounds signifying (*a*) expense, (*b*) a task, (*c*) a statement, (*d*) a dowry, (*e*) to result, (*f*) to pretend, (*g*) to betake oneself, (*h*) generous, (*i*) productive, (*j*) indulgent.

5. Give the German for—3, 13, 30, 33, 300, 3000; 3rd, 13th, 30th, 300th, $\frac{1}{3}$, $\frac{1}{13}$, 3; 3.30 p.m., 3.15 a.m.; 3d April 1893.

6. Give the German for—Virtue, virtuous; true, truth, truthful, truthfulness; child, childish, childlike, childhood; weak, weakness, a weakling, to weaken; brother, a brotherhood, brotherly; a ship, shipwreck, navigable; a christian, christianity, christendom; iron, made of iron; wood, wooden, woody.

7. Distinguish between—empfindlich, empfindſam; offenbar, öffentlich; ſparſam, ſpärlich; gründlich, ergründlich, Grundſatz; beehren, entehren, verehren; die Bänke, die Banken; die Zolle, die Zölle; die Laden, die Läden.

8. Give the past participles of the following verbs:—heben, ſingen, bringen, ziehen, zeihen, zeigen, reiten, bereiten (to prepare), unternehmen, frühſtücken, vorſtellen, beunruhigen, anvertrauen, antworten, mißleiten, mißbrauchen, ü'berſetzen, überſe'tzen, darſtellen.

(*Only one of the three following questions to be attempted.*)

III. 1. Give the English *etymological* equivalent for the following words:—Dach, Rücken, Tier, Mut, Lied, Teich, Teig, Urteil, Baum, Leib, gleich, ſehr, feuchen, tauchen, teilen, tapfer.

2. (*a*) When does the Old High German period begin and end, and when does the Middle High German period end? (*b*) State what is meant by Lautverſchiebung, and give illustrations. (*c*) What remains have we of Gothic literature? give names and dates if possible.

3. Give the names of three German dramatists, three lyric poets, and three historians; mention one work of each.

DYNAMICS.

Thursday, 13*th October* 1892.—1 *to* 4 *o'clock.*

1. Show that a velocity may be represented by a straight line, and prove the proposition known as the triangle of velocities.

A point has two simultaneous velocities equal to 1 and 2 in perpendicular directions; find the resultant.

2. How is acceleration measured?

A particle projected vertically upwards attains an elevation of 100 feet in 10 seconds; find the initial speed. [The acceleration of gravity =32, in feet and seconds.]

3. Define Force and Momentum.

Find the force under which a mass of one-tenth of a pound will acquire a speed of 1000 feet per second, in three seconds. State the units in terms of which your answer is given.

4. Define the Foot-Poundal, and indicate its dimensions in terms of the fundamental units of mass, time, and space.

Find the force which, exerted through a space of three feet, will give to a mass of one-tenth of a lb. a speed of 1000 feet per second.

5. Define the Moment of a Force.

Masses of 1, 2, 3, and 4 lbs. are arranged at equal intervals along a straight line; find the centres of inertia of the masses.

6. State the Laws of Friction.

A body placed on an inclined plane of 1 in 3, is supported by limiting friction; determine the coefficient of friction between the body and the plane.

7. Define Specific Gravity.

A mass of 12 lbs. of a certain substance is found to weigh 9 lbs. in a liquid whose specific gravity is one-third; what is the specific gravity of the substance?

8. Find the pressure on a vertical lock-gate 10 feet broad, against which the water rises four feet. [A cubic foot of water weighs 62·5 lbs.]

9. State Boyle's Law in the form of a relation between the pressure and density of a gas. Describe the method by which the law is proved experimentally for pressure less than an atmosphere.

Friday, 7*th April* 1893.—9 *to* 12 *o'clock.*

[*The units in terms of which the answers are given must be stated.*]

1. State the law by which velocities are compounded and resolved. Mention other kinematical or physical quantities which are compounded and resolved according to the same law.

A point has a velocity of 10 units in a direction making an angle of

60° with the horizon. Find the vertical and horizontal components of the velocity.

2. Define unit acceleration, and compare it with the acceleration of gravity.

With what speed must a stone be thrown upwards so as to attain its greatest height after 10 seconds? How many seconds will it take to attain a height equal to half its greatest height?

3. Define momentum, and show that force may be defined as the time-rate at which momentum varies.

Find the uniform force under which a mass of 1-12th of a lb. will acquire a speed of 1600 feet per second in 4 seconds. Find also through what space this force must have been exerted.

4. Define the foot-pound and the horse-power.

How many tons of material per hour could a 10-horse-power engine draw to the surface from a mine 1000 feet deep?

5. Define the centre of inertia of a body.

Masses of 1, 3, 5 and 7 pounds are placed at distances 2, 4, 6, 8 feet from a given horizontal plane; find the distance of their centre of inertia from the plane.

6. State the laws of statical friction, and define the coefficient of friction.

A body is placed on an inclined plane of 1 in 5, and is just about to slip down. Determine the coefficient of friction between the body and the plane.

7. Define density and specific gravity.

A body displaces $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ of its volume respectively, when it floats in different liquids. Compare the specific gravities of the liquids.

8. Prove that the pressure in a heavy liquid at rest is the same at all points of a horizontal plane.

A tank 4 feet square and 10 feet deep is filled with water. Find the pressure on the bottom of the tank and on one side. [The weight of a cubic foot of water is 62·5 lbs.]

9. Describe the action of a force pump.

The cross section of a force pump has an area of 5 square inches. With what pressure must it be forced down to be capable of raising water to an elevation of 100 feet?

10. State the relation among the pressure, volume, and temperature of a given mass of air. If the pressure be increased by one-tenth and the temperature raised from 50° to 100° C, in what ratio will the volume be altered?

EXAMINATION PAPERS FOR ORDINARY DEGREE OF M.A. IN 1892-93.

A.—DEPARTMENT OF LANGUAGE AND LITERATURE.

LATIN.

Tuesday, 11*th October* 1892.—9 *to* 11 *o'clock.*

1. For Latin Prose :—

The Corsicans heard of young Paoli's abilities, and solicited him to come over to his native country, and take the command. He did not hesitate long : his father, who was too far advanced in years to take an active part himself, encouraged him to go ; and when they separated, the old man fell on his neck and kissed him and gave him his blessing : "My own son," said he, "perhaps I may never see you more ; but in my mind I shall ever be present with you. Your design is great and noble, and I doubt not but God will bless you in it. I shall devote to your cause the little remainder of my life in offering up my prayers for your success." When Paoli assumed the command he found all things in confusion ; but he soon took such measures that, if France had not interfered, Corsica might at this day have been as free, flourishing, and happy a commonwealth as any of the Grecian states in the days of their prosperity.

2. Translate :—

Epirotarum legatio erat minime in partem ullam liberi aut simplicis animi. apud regem gratiam initam volebant cum eo ut caverent ne quid offenderent Romanos. petebant enim, ne se temere in causam deduceret, expositos adversus Italiam pro omni Graecia et primos impetus Romanorum excepturos. sed si ipse posset terrestribus navalibusque copiis praesidere Epiro, cupide eum omnis Epirotas et urbibus et portubus suis accepturos. si id non posset, deprecari, ne se nudos atque inermes Romano bello obiceret. hac legatione id agi adparebat, ut sive, quod magis credebant, abstinuisset Epiro, integra sibi omnia apud exercitus Romanos essent, conciliata satis apud regem gratia, quod accepturi fuissent venientem, sive venisset, sic quoque spes veniae ab Romanis foret, quod non exspectato longinquo ab se auxilio praesentis viribus subcubuissent. huic tam perplexae legationi quia non satis in promptu erat, quid responderet, legatos se missurum ad eos dixit, qui de iis quae ad illos seque communiter pertinerent loquerentur.

Tuesday, 11*th October* 1892.—11.30 *to* 1.30 *o'clock.*

I. (1) Translate Horace, *Od.* iii., 27 ll. 1-16, from "Impios parrae recinentis omen," to "Nec vaga cornix."

(2) Translate, and *very briefly* explain :—

(*α*) Excipiantque senes, quos in vivaria mittant.

(*β*) Caerite cera
Digni.

(γ) Pernicies et tempestas barathrumque macelli.
(δ) Hoc quoque te manet, ut pueros elementa docentem
Occupet extremis in vicis balba senectus.
(ε) Ille per extentum funem mihi posse videtur
Ire poeta, meum qui pectus inaniter angit.
(ζ) Quanto cum fastu, quanto molimine circum-
Spectemus vacuam Romanis vatibus aedem.

II. (1) Translate Virgil, *Georg.* ii., 276-287, from "Nec secius omnis in unguem," to "se extendere rami."

(2) Translate, and *briefly* explain:—

(α) Nunc virides etiam occultant spineta lacertos,
Thestylis et rapido fessis messoribus aestu
Allia serpyllumque herbas contundit olentes.
(β) Dic quibus in terris—et eris mihi magnus Apollo—
Tres pateat caeli spatium non amplius ulnas.
(γ) nec Phoebo gratior ulla est
Quam sibi quae Vari praescripsit pagina nomen.
(δ) Ecce Dionaei processit Caesaris astrum.
(ε) Area cum primis ingenti aequanda cylindro
Et vertenda manu et creta solidanda tenaci
Ne subeant herbae neu pulvere victa fatiscat.
(ζ) Satis iam pridem sanguine nostro
Laomedonteae luimus periuria Troiae.

III. (1) Translate Cic., *Pro Murena*, xx. 41-2, from "Huius sors ea fuit," to "cui dolet meminit."

(2) Translate and explain the legal phrase—"inde ibi ego te ex iure manum consertum voco."

IV. 1. Translate, with *short* explanations where necessary:—

(α) Sub ipsas superioris anni Kalendas Decembres Aulus Vitellius inferiorem Germaniam ingressus hiberna legionum cum cura adierat. Redditi plerisque ordines, remissa ignominia, adlevatae notae; plura ambitione, quaedam iudicio, in quibus sordes et avaritiam Fontei Capitonis adimendis adsignandisve militiae ordinibus integre mutaverat. Nec consularis legati mensura, sed in maius omnia accipiebantur.

(β) Ac ne reverentiam imperii exuere viderentur, senatus populique Romani obliterata iam nomina sacramento advocabant, nullo legatorum tribunorumve pro Galba nitente, quibusdam ut in tumultu notabilius turbantibus. Non tamen quisquam in modum contionis aut suggestu locutus: neque enim erat adhuc cui imputaretur.

(γ) Igitur versare sententias et huc atque illuc torquere, hostem et parracidam Vitellium vocantes, providentissimus quisque volgaribus conviciis, quidam vera probra iacere, in clamore tamen et ubi plurimae voces, aut tumultu verborum sibi ipsi obstrepentes.

2. Explain the terms: cursus honorum inoffensus: cohortes alaeque legatus legionis: evocati: vigiles: primipilares: fiscus.

V. Answer any *three* of the following questions :—

1. At what periods of Horace's life were his different works published? What does he tell us about himself in the *Epistles*?

2. Give some account of the rural life which Vergil describes in his *Eclogues* and *Georgics*. How far did it exist in Italy under Augustus?

3. Mention the chief reforms proposed by Tiberius Gracchus, and show how far they were carried into effect.

4. Sketch the history of the Third Mithridatic War. What was Cicero's connection with it?

5. When were the *Histories* of Tacitus written? What were their principal sources? How do they differ from his earlier and later works?

6. Narrate shortly the events of the year 69 A.D. in Italy and the provinces.

Monday, 3rd April 1893.—9 *to* 11 *o'clock.*

1. Translate into Latin Prose :—

This fortification would save Syracuse from those disasters which had so recently befallen Agrigentum and the other cities. Accordingly, it was exceedingly popular among the Syracusans, and produced between them and Dionysius a friendship and harmony such as had not before been seen. Every man laboured at the work not merely with good-will, but with enthusiasm, while the despot himself displayed unwearied zeal, passing whole days on the spot, and taking part in all the hardship and difficulty. He showed himself everywhere as an unguarded citizen, without suspicion or reserve, in marked contrast with the harshness of his previous demeanour, proclaiming rewards for the best and most rapid workmen. He also provided attendance or relief for those whose strength gave way. Such was the emulation thus inspired, that the numbers assembled, often toiling by night as well as by day, completed the whole wall in the space of twenty days.

2. Translate :—

Utrimque nudata equite erat Punica acies, cum pedes concurrit, nec spe nec viribus iam par. Ad hoc dictu parva, sed magna eadem in re gerenda momenta: congruens clamor a Romanis eoque maior et terribilior, dissonae illis, ut gentium multarum discrepantibus linguis, voces; pugna Romana stabilis et suo et armorum pondere incumbentium in hostem, concursatio et velocitas illinc maior quam vis. Igitur primo impetu extemplo movere loco hostium aciem Romani. Deinde in summotos gradu inlato, aliquantum spatii velut nullo resistente incessere, urgentibus et novissimis primos, ut semel motam aciem sensere, quod ipsum vim magnam ad pellendum hostem addebat. Apud hostes auxiliares cedentes secunda acies, Afri et Carthaginienses, adeo non sustinebant, ut contra etiam, ne resistentes pertinaciter primos caedendo ad se perveniret hostis, pedem referrent.

Monday, 3rd April 1893.—11.30 *to* 1.30 *o'clock.*

1. (1) Translate, Horace, *Ep.*, i. 6, ll. 29-44, *from* "Vis recte vivere," : *to* "partem vel tolleret omnes."

(2) Translate, with *brief* notes :—

(α) Iam bis Monaeses et Pacori manus
Non auspicatos contudit impetus
Nostros, et adiecisse praedam
Torquibus exiguis renidet.
(β) Quo praebente domum et quota
Pelignis caream frigoribus, taces.
(γ) Caementis licet occupes
Tyrrhenum omne tuis et mare Apulicum.
(δ) Hinc ad vina redit laetus et alteris
Te mensis adhibet deum.
(ε) Seu pisces seu porrum et caepe trucidas.
(ϛ) Fescennina per hunc inventa licentia morem
Versibus alternis opprobria rustica fudit.

2. (1) Translate, Virgil, *Georg.*, i. 104-117, *from* "Quid dicam," *to* "umore lacunae?"

(2) Translate, with *very brief* notes :—

(α) Hinc tibi, quae semper, vicino ab limite saepes
Hyblaeis apibus florem depasta salicti
Saepe levi somnum suadebit inire susurro.
(β) Adspice convexo nutantem pondere mundum.
(γ) Carmina descripsi et modulans alterna notavi.
(δ) Nam neque adhuc Vario videor nec dicere Cinna
Digna, sed argutos inter strepere anser olores.
(ε) Septuma post decumam felix et ponere vitem
Et prensos domitare boves et licia telae
Addere.
(ϛ) Tu spisso vimine qualos
Colaque prelorum fumosis deripe tectis.

3. Translate, with *short* notes on the words italicised :—

(α) Nam cum permulta praeclare legibus essent constituta, ea iure consultorum ingeniis pleraque corrupta et depravata sunt. Mulieres omnes propter infirmitatem consilii maiores in tutorum potestate esse voluerunt : hi invenerunt *genera tutorum*, quae potestate mulierum continerentur. *Sacra* interire illi noluerunt : horum ingenio senes ad *coemptiones* faciendas interimendorum sacrorum causa reperti sunt.

(β) "At enim in praeturae petitione prior *renuntiatus est* Servius." Pergitisne vos tamquam ex *syngrapha* agere cum populo, ut, quem locum semel honoris cuipiam dederit, eundem in reliquis honoribus debeat?

(γ) Respondebo igitur Postumo primum, qui nescio quo pacto mihi videtur praetorius candidatus in consularem quasi *desultorius* in *quadrigarum* curriculum incurrere.

4. (1) Translate, Tacitus, *Hist.*, i. 39, *from* "Iam exterritus Piso" *to* "animum ostentaverant."

(2) Quote from the first book of the *Histories* any grammatical constructions that you remember specially characteristic of Tacitus.

5. Answer any *three* of the following questions:—

(1) How would you classify the *Odes* of Horace as regards tone and subject matter? What is the prevailing character of the Third and Fourth Books?

(2) Give some account of (α) Theocritus (β) Hesiod. To what extent is Virgil indebted to each of them in the *Eclogues* and *Georgics?*

(3) Mention the principal measures passed by C. Gracchus and by Sulla, and explain shortly the object of each.

(4) Who were the chief pleaders on either side in the action against Murena? Give an account of any one of them, and of his relations with Cicero.

(5) Sketch briefly the public career of Octavian up to the battle of Actium.

(6) Explain and show the importance of Tacitus' remark "*evolgato imperii arcano, posse principem alibi quam Romae fieri.*"

GREEK.

Wednesday, 12*th October* 1892.—11.30 *to* 1.30 *o'clock.*

I. (i) Translate *Od.*, xxii. 180-193, from "*ἤτοι ὁ μὲν θαλάμοιο,*" to "*πέλασάν τε δοκοῖσιν.*"

(ii) Scan the following lines, adding notes where explanation is needed:—

ἀλλ' ἄγε δεῦρο, πέπον, παρ' ἔμ' ἵστασο καὶ ἴδε ἔργον.
ὄφρα ἔπος εἴπωμι τό μοι καταθύμιον ἐστίν.
ἤσπαιρον δὲ πόδεσσι μίνυνθά περ, οὔτι μάλα δήν.

(iii) Write notes on the meaning of *ὀλέθρου πεἰρατα, ῥῶγες μεγάροιο, ἑτεραλκέα νίκην, ἄπτερος μῦθος, ἀάατος, ἴσκεν, εἴλεον.*

II. (1) Translate, with brief notes on the words underlined:— Eurip., *Hel.*, 308-320—

(i) ΕΛ. *καὶ μὴν σαφῶς ἔλεξ' ὀλωλέναι πόσιν.*
ΧΟ. *πόλλ' ἂν γένοιτο καὶ διὰ ψευδῶν ἔπη.*
ΕΛ. *καὶ τἄμπαλίν γε τῶνδ' ἀληθείᾳ σαφῆ.*
ΧΟ. *εἰς ξυμφορὰν γὰρ ἀντὶ τἀγαθοῦ φέρει.*
ΕΛ. *φόβος γὰρ εἰς τὸ δεῖμα περιβαλών μ' ἄγει.*
ΧΟ. *πῶς δ' εὐμενείας τοισίδ' ἐν δόμοις ἔχεις;*
ΕΛ. *πάντες φίλοι μοι πλὴν ὁ θηρεύων γάμους.*
ΧΟ. *οἶσθ' οὖν ὃ δρᾶσον; μνήματος λιποῦσ' ἕδραν,*

ΕΛ. *εἰς ποῖον ἕρπεις μῦθον ἢ παραίνεσιν;*
ΧΟ. *ἐλθοῦσ' ἐς οἴκους, ἣ τὰ πάντ' ἐπίσταται,*
τῆς ποντίας Νηρῇδος ἐκγόνου κόρης,
πυθοῦ πόσιν σὸν Θεονόης εἴτ' ἔστ' ἔτι
εἴτ' ἐκλέλοιπε φέγγος.

(2) Translate and comment on the phrases :—*πυρὶ μέλουσαν*—*πολιὰ παρθενεύεται*—*ἐμπύρους ὀρθοστάτας*—*οὐκ ἐς ἁρπαγάς*—*ἐλθεῖν διὰ μάχης.*

III. Translate Demosth. *Androt.*, §§ 70, 71, from "*τὰ μὲν οὖν πόλλ',*" to "*μὲν οἶμαι.*"

IV. (1) Translate :—(i) Thucyd., iii. 23, from "*ἐπεὶ δὲ πάντες,*" to "*ἐπεραιώθησαν.*"

(ii) iii. 82, from "*οἱ γὰρ ἐν ταῖς,*" to "*ἐκπιμπλάναι.*"

(2.) Parse these words :—*ἐφθάραται, προήσθε, καθεστήξει, ᾐτιαμένων, ἔσπειστο.*

V. Answer any *three* of the following questions :—

(1) In what respects do the customs and moral ideas of the Homeric age present a favourable contrast to those of Athens in the fifth century?

(2) Discuss, and illustrate from the *Helena*, the attitude of Euripides towards the popular religion. Compare him in this respect with (α) Æschylus (β) Aristophanes.

(3) Sketch the chief events in the history of Plataea, giving their dates.

(4) Describe the original constitution and aims of the Confederacy of Delos, and show how these had been modified before the outbreak of the Peloponnesian War.

(5) Give the date and occasion of the Speech *Against Androtion.* What other speeches fall within the same group? Give an outline of the home policy of Demosthenes, indicating its relation to his foreign policy.

Wednesday, 12*th October* 1892.—2.30 *to* 4.30 *o'clock.*

1. Translate :—

ἐμφανίζων δὲ καὶ τοῦτο ὅτι περὶ πολλοῦ ἐποιεῖτο μηδένα μήτε φίλον ἀδικεῖν μήτε σύμμαχον, ἀλλὰ τὸ δίκαιον ἰσχυρῶς ὁρῶν, μᾶλλον καὶ τοὺς ἄλλους ᾤετ' ἂν τῶν μὲν αἰσχρῶν κερδέων ἀπέχεσθαι, διὰ τοῦ δικαίου δ' ἐθέλειν πορίζεσθαι. καὶ αἰδοῦς δ' ἂν ἡγεῖτο μᾶλλον πάντας ἐμπιμπλάναι, εἰ αὐτὸς φανερὸς εἴη πάντας οὕτως αἰδούμενος ὡς μήτ' εἰπεῖν ἂν μήτε ποιῆσαι μηδὲν αἰσχρόν. ἐτεκμαίρετο δὲ τοῦτο οὕτως ἕξειν ἐκ τοῦδε· μὴ γὰρ ὅτι ἄρχοντα, ἀλλὰ καὶ οὓς οὐ φοβοῦνται, μᾶλλον τοὺς αἰδουμένους αἰδοῦνται τῶν ἀναιδῶν οἱ ἄνθρωποι· καὶ γυναῖκας δὲ ἃς ἂν αἰδουμένας αἰσθάνωνται, ἀνταιδεῖσθαι μᾶλλον ἐθέλουσιν ὁρῶντες. τὸ δ' αὖ πείθεσθαι οὕτω μάλιστ' ἂν ᾤετο ἔμμονον εἶναι τοῖς περὶ αὐτόν, εἰ τοὺς ἀπροφασίστως πειθομένους φανερὸς εἴη μᾶλλον τιμῶν τῶν τὰς μεγίστας ἀρετὰς καὶ ἐπιπονωτάτας δοκούντων παρέχεσθαι. γιγνώσκων δ' οὕτω καὶ ποιῶν διετέλει. καὶ σωφροσύνην δ' αὐτοῦ ἐπιδεικνὺς μᾶλλον ἐποίει καὶ ταύτην πάντας ἀσκεῖν. ὅταν γὰρ ὁρῶσιν, ᾧ μάλιστα ἔξεστιν ὑβρίζειν, τοῦτον σωφρονοῦντα, οὕτω μᾶλλον οἵ γε ἀσθενέστεροι ἐθέλουσιν οὐδὲν ὑβριστικὸν ποιοῦντες φανεροὶ εἶναι.

2. Translate into Greek :—

Besides these modes of oppression, the English soldiers, who had been placed in garrison in the different castles of Scotland, thought themselves masters of the country, treated the Scots with great contempt, took from them by main force whatever they had a fancy to, and if the owners offered to resist, abused them, beat and wounded and sometimes killed them; for which acts of violence the English officers did not check or punish their soldiers. Scotland was, therefore, in great distress, and the inhabitants, exceedingly enraged, only wanted some leader to command them, to rise in a body against the English, and recover the liberty and independence of their country.

SCOTT.

Tuesday, 4th April 1893.—11.30 *to* 1.30 *o'clock.*

I. Translate, with brief notes on the words underlined :—

(1) Ἀμφίνομος δ' Ὀδυσῆος ἐείσατο κυδαλίμοιο
ἀντίος ἀΐξας, εἴρυτο δὲ φάσγανον ὀξύ,
εἴ πώς οἱ εἴξειε θυράων. ἀλλ' ἄρα μιν φθῆ
Τηλέμαχος κατόπισθε βαλὼν χαλκήρεϊ δουρὶ
ὤμων μεσσηγύς, διὰ δὲ στήθεσφιν ἔλασσεν·
δούπησεν δὲ πεσών, χθόνα δ' ἤλασε παντὶ μετώπῳ.
Τηλέμαχος δ' ἀπόρουσε, λιπὼν δολιχόσκιον ἔγχος
αὐτοῦ ἐν Ἀμφινόμῳ· περὶ γὰρ δίε μή τις Ἀχαιῶν
ἔγχος ἀνελκόμενον δολιχόσκιον ἢ ἐλάσειεν
φασγάνῳ ἀΐξας ἠὲ προπρηνέϊ τύψας.

(2) Τὸν δ' ἄρ' ὑπόδρα ἰδὼν προσέφη πολύμητις Ὀδυσσεύς
"εἰ μὲν δὴ μετὰ τοῖσι θυοσκόος εὔχεαι εἶναι,
πολλάκι που μέλλεις ἀρήμεναι ἐν μεγάροισιν
τηλοῦ ἐμοὶ νόστοιο τέλος γλυκεροῖο γενέσθαι,
σοὶ δ' ἄλοχόν τε φίλην σπέσθαι καὶ τέκνα τεκέσθαι·
τῷ οὐκ ἂν θάνατόν γε δυσηλεγέα προφύγοισθα."

Scan the lines, adding short notes :—

(*a*) σμερδαλέα ἰάχων· ὁ δ' ἁμαρτῇ δῖος Ὀδυσσεύς.
(*b*) κεῖνος δὴ αὖτ' ἀΐδηλος ἀνὴρ ὃν ὀϊόμεθ' αὐτοί.

Write notes on the words μέμβλετο, ἀρεσσάμενοι, πέπον, ἐπιάλλω, ἐπέγραψεν, θῦεν, ὀρσοθύρη.

II. Translate, with brief notes on the words underlined :—

(1) ἡγοῦ σύ μοι φέρουσα λαμπτήρων σέλας,
θείου δὲ σεμνὸν θεσμὸν αἰθέρος μυχόν,

ὡς πνεῦμα καθαρὸν οὐρανοῦ δεξώμεθα·
σὺ δ' αὖ κέλευθον εἴ τις ἔβλαψεν ποδὶ
στείβων ἀνοσίῳ, δὸς καθαρσίῳ φλογί,
κρυῦσον δὲ πεύκην, ἵνα διεξέλθω, πάρος.
νόμον δὲ τὸν ἐμὸν θεοῖσιν ἀποδοῦσαι, πάλιν
ἐφέστιον φλόγ' εἰς δόμους κομίζετε.

(2) *κάλλιστα δὴ τάδ' ἥρπασ' ἐν τύχῃ πόσις·*
ἃ γὰρ καθήσειν ὅπλ' ἔμελλεν εἰς ἅλα,
ταῦτ' ἐμβαλὼν πόρπακι γενναίαν χέρα
αὐτὸς κομίζει δόρυ τε δεξιᾷ λαβών,
ὡς τῷ θανόντι χάριτα δὴ συνεκπονῶν.
προύργου δ' ἐς ἀλκὴν σῶμ' ὅπλοις ἠσκήσατο,
ὡς βαρβάρων τρόπαια μυρίων χερὶ
θήσων, ὅταν κωπῆρες εἰσβῶμεν σκάφος,
πέπλους ἀμείψας, ἀντὶ ναυφθόρου στολῆς,
ἁγὼ νιν ἐξήσκησα καὶ λουτροῖς χρόα
ἔδωκα, χρόνια νίπτρα ποταμίας δρόσου.

III. (1) Translate :—

(i) Thucyd. iii. 34, *from* "Παραπλέων" *to* "ἐπάγονται."
(ii) Thucyd. iii. 68, *from* "Τοιαῦτα δε οἱ" *to* "ἐποιήσαντο οὐδένα."

(2) Parse these words :—*τετάχαται, ἐνενικήκει, εἰσαμένων, εἴργασθε, ἀνηλοῦντο.*

IV. Translate, with brief notes on the words underlined :—

εἰ δή τις ὡς μὲν οὐχὶ κακοῦργός ἐστι μὴ λέγοι, ἢ ὡς οὐκ ἀσεβής, ἢ ὅ τι δήποτ' εἴη δι' ὃ κρίνοιτο, διὰ ταῦτα δ' ἐκφεύγειν ἀξιοίη, εἰ μὲν ἀπηγμένος εἴη, διότι πρὸς διαιτητὴν ἐξῆν αὐτῷ λαχεῖν καὶ γράφεσθαι χρῆν, εἰ δὲ πρὸς διαιτητῇ φεύγοι, ὅτι χρῆν σε ἀπάγειν, ἵν' ἐκινδύνευες περὶ χιλιῶν, γέλως ἂν εἴη δήπουθεν. οὐ γὰρ τόν γε μηδὲν πεποιηκότα δεῖ περὶ τοῦ τρόπον ὅντινα χρὴ διδόναι δίκην ἀντιλέγειν, ἀλλ' ὡς οὐ πεποίηκεν ἐπιδεικνύναι. τὸν αὐτὸν δὴ τρόπον, 'Ανδροτίων, καὶ σὺ μὴ διὰ ταῦτα οἴου σοι προσήκειν μὴ δοῦναι δίκην, ὅτι καὶ πρὸς τοὺς θεσμοθέτας ἔσθ' ἡμῖν ἐπαγγελία· ἀλλ' ἢ δεῖξον οὐ πεποιηκότα ταῦτα σεαυτὸν, ἢ δίκην ὕπεχε ὧν γέγραφάς τι τοιοῦτος ὤν· οὐ γὰρ ἔξεστί σοι.

Explain :—*εἰσφορά, τῶν νόμων οὓς παρεγραψάμεθα, ἐπὶ τὴν εἴσπραξιν παρέδυ, τὰ πομπεῖα κατακόπτειν.*

V. (1) Answer any *two* of the following questions :—

1. Show the influence exerted by the Persian invasions upon the balance of power in Greece.
2. Sketch the history of the first four years of the Peloponnesian war.
3. Illustrate the practical working of the Athenian constitution in the time of Demosthenes.

(2) Answer any *one* of the following questions :—

1. What do we learn from the *Odyssey* as to (*a*) the geographical knowledge of the poet ; (*b*) slavery in the heroic age ; (*c*) the development of the arts?
2. State the changes introduced into Attic tragedy by Euripides, as regards (α) plot, (β) treatment of chorus, (γ) diction.
3. What do you know of the chief prose writers in the interval between Thucydides and Demosthenes?

Tuesday, 4th April 1893.—2.30 *to* 4.30 *o'clock.*

1. Translate :—

πάλαι γὰρ δὴ τὸ Μηδὲν ἄγαν λεγόμενον καλῶς δοκεῖ λέγεσθαι· τῷ γὰρ ὄντι εὖ λέγεται. ὅτῳ γὰρ ἀνδρὶ εἰς ἑαυτὸν ἀνήρτηται πάντα τὰ πρὸς εὐδαιμονίαν φέροντα ἢ ἐγγὺς τούτου, καὶ μὴ ἐν ἄλλοις ἀνθρώποις αἰωρεῖται, ἐξ ὧν ἢ εὖ ἢ κακῶς πραξάντων πλανᾶσθαι ἠνάγκασται καὶ τὰ ἐκείνου, τούτῳ ἄριστα παρεσκεύασται ζῆν, οὗτός ἐστιν ὁ σώφρων καὶ οὗτος ὁ ἀνδρεῖος καὶ φρόνιμος· οὗτος γιγνομένων χρημάτων καὶ παίδων καὶ διαφθειρομένων μάλιστα πείσεται τῇ παροιμίᾳ· οὔτε γὰρ χαίρων οὔτε λυπούμενος ἄγαν φανήσεται διὰ τὸ αὑτῷ πεποιθέναι. τοιούτους δὲ ἡμεῖς γε ἀξιοῦμεν καὶ τοὺς ἡμετέρους εἶναι καὶ βουλόμεθα καὶ φαμέν, καὶ ἡμᾶς αὐτοὺς νῦν παρέχομεν τοιούτους, οὐκ ἀγανακτοῦντας οὐδὲ φοβουμένους ἄγαν, εἰ δεῖ τελευτᾶν ἐν τῷ παροντι. δεόμεθα δὴ καὶ πατέρων καὶ μητέρων, τῇ αὐτῃ ταύτῃ διανοίᾳ χρωμένους τὸν ἐπίλοιπον βίον διάγειν, καὶ εἰδέναι, ὅτι οὐ θρηνοῦντες οὐδὲ ὀλοφυρόμενοι ἡμᾶς ἡμῖν μάλιστα χαριοῦνται, ἀλλ' εἴ τις ἔστι τοῖς τετελευτηκόσιν αἴσθησις τῶν ζώντων, οὕτως ἀχάριστοι εἶεν ἂν μάλιστα, ἑαυτούς τε κακοῦντες καὶ βαρέως φέροντες τὰς συμφοράς.

2. Translate into Greek :—

"The Athenians," said Hermokrates to his countrymen, "have not been always eminent at sea as they now are : they were once landsmen like you, and more than you—they were only forced on shipboard by the Persian invasion. The only way to deal with bold men like them, is to show a front bolder still. They have often by their audacity daunted enemies of greater real force than themselves, and they must now be taught that others can play the same game with them. Go right at them before they expect it—and you will gain more by thus surprising and intimidating them, than you will suffer by their superior science."—GROTE.

RHETORIC AND ENGLISH LITERATURE.

FIRST PAPER.

Friday, 14th October 1892.—1 *to* 2 *o'clock.*

Write an Essay on either of these subjects :—

The Comic Element in *A Midsummer Night's Dream.*
The Hovel Scene in *King Lear.*

SECOND PAPER.

Friday, 14th October 1892.—2 *to* 4 *o'clock.*

1. Explain and exemplify the following terms of Rhetoric:—*Metonymy*, *Metalepsis*, *Miscollocation*, *Pronunciability*, *Assonance*, *Unrelated Participle.*

2. State the chronological scheme adopted in the Lectures for the History of English Literature from 1250 to 1688; and name five important writers in each period of the scheme, adding a brief descriptive note to each name.

3. Give the dates of the first four periods under which Morris discusses the growth of the language. Trace through them (1) the present participle; (2) the ordinary infinitive; (3) the dative or gerundial infinitive.

4. Summarise what Wordsworth replies to these questions:—"What is a Poet? To whom does he address himself? And what language is to be expected from him?"

5. What is a Sonnet? Explain the occasions, and give the substance, of any three of Milton's Sonnets, quoting where you can.

6. Annotate *three* of the following from *The Scholemaster*:—"The true herb Moly"; "mark all mathematical heads"; "English Italians"; "audax contentio"; "εὐφυής"; "my friend Joan. Sturmius"; "Cicero only excepted, and one or two more in Latin, they be all patched clouts and rags"; "the best translation is but an evil imped wing to fly withal," "Plautus and Terence be like mean painters that work by halves."

7. How does De Quincey distinguish eloquence and rhetoric? Explain

(1) Satan is rhetorical in *Paradise Lost*, eloquent in *Paradise Regained.*

(2) "The age of rhetoric, like that of chivalry, has passed."

8. No. 1 of the following is a piece of blank verse printed as prose; the others are lines from English poems. Rewrite No. 1 in its proper form of blank verse, without changing a word or the order of the words; and give the metrical formula and prosodic name of each of the others:—

(1) "Where is now the soul of famous Cato,—him that dared oppose the majesty of Caesar, and determined never to live his servant; and where now the soul of constant Brutus, who, being proof against all charm of benefits, did strike that fatal blow?"

(2) "Yet we will not die forlorn."

(3) "Welcome from sweeping o'er sea and through channel."

(4) "For the present we part, but I hope not for ever."

(5) "A smile can enchant, and a tear can dissuade."

(6) "Hide me from my deep emotion, O thou wondrous Mother-Age."

(7) "Pilgrim youth though I am from the lands of the northern pole-star."

FIRST PAPER.

Thursday, 6*th April* 1893.—1 *to* 2 *o'clock.*

Write an Essay upon any *one* of the following subjects :—

The Deaths in *King Lear.*

The character and function of Puck in *A Midsummer-Night's Dream.*

Roger Ascham and *The Scholemaster.*

SECOND PAPER.

Thursday, 6*th April* 1893.—2 *to* 4 *o'clock.*

1. Divide the history of English Literature from 1250 till now into Periods, as in the chronological scheme adopted in the Course; and name in each period four writers of very high importance, adding a descriptive word to each name.

2. What are the "periods" during which Latin words came into English? Give illustrations. Show by examples how our vocabulary has been enriched by the coming of the same Latin words to us both directly and indirectly.

3. Distinguish between the meaning of the word "metaphysical" as it may be used to define a characteristic of Shakespeare's mode of thought and the meaning of the same word in Dr Johnson's account of the English "metaphysical school" of English Poets.

4. Give some account of the purport of either of these passages in *Paradise Regained*, and of its connexion with the story of the poem :—(1) the Survey of the Kingdoms of the Earth at the date of the story; (2) the Review of Greek Literature and Philosophy. Introduce a quotation if you can.

5. Illustrate, by reference to any four of Milton's sonnets, the statement that the Sonnet should contain "a condensed expression of some one thought or feeling."

6. Sketch the argument of the First Book of *The Excursion.* Show that "the feeling therein developed gives importance to the action and the situation, and not the action and situation to the feeling" (Wordsworth).

7. Who, according to De Quincey, are the chief rhetorical writers in English? Give his account of the rhetorical element in the writings of two of them.

8. No. 1 of the following is a piece of blank verse printed as prose; the others are lines from English poems. Rewrite No. 1 in its proper form of blank verse, without changing a word or the order of the words; and give the metrical formula and the prosodic name of each of the others :—

(1) "Rome must know the value of her own: 'twere a concealment worse than a theft, no less than a traducement, to hide your doings, and to silence that which, to the spire and top of praises vouch'd, would

seem but modest: therefore, I beseech you,—in sign of what you are, not to reward what you have done,—before our army hear me."

(2) "Still wafting onward all to one dark silent port."
(3) "Up! up, my brave kinsmen! belt swords and begone."
(4) "Up with me! up with me into the clouds."
(5) "Write the characters in dust."
(6) "Not the fate of broad Europe could bend his brave spirit."
(7) "Works to corrupt each heart that is yet untainted of evil."
(8) "In the spring a livelier iris changes on the burnish'd dove."

DEPARTMENT OF MENTAL PHILOSOPHY.

LOGIC AND PSYCHOLOGY.

Thursday, 13*th October* 1892.—9 *to* 12 *o'clock.*

1. Define Judgment and Inference. Discuss any other definitions with which you are acquainted.

2. Why are the Imperfect Figures reduced? Explain the ground of certainty in both methods of reduction.

3. Explain the theoretical and the practical value of the Method of Difference.

4. What are the modes of defining? Give an example of each, selecting terms to which the several modes are appropriate.

5. Examine the logical value of the following:—
   (1) If only the ignorant despise knowledge, this man cannot be ignorant, for he praises it.
   (2) Since we cannot love those we lose, can we altogether lose those we love?
   (3) On the principles of Inductive Logic, Free Trade cannot be called a *vera causa* of our national prosperity, either till other great countries have tried it, or till they do not prosper without it.

6. What is meant by Laws of Association? What are they? Examine the view that resolves the process of reasoning into them.

7. What is the "proper object" of a sense? Discuss the proper objects of touch, of hearing, and of seeing.

8. What other immediate knowledge have we by these senses? State concisely the argument founded upon this in the *Divine Visual Language.*

9. Explain the purpose and the general plan of Locke's *Essay.* What is his distinction between the primary qualities, the secondary qualities, and the powers of things? How does Berkeley treat each of these?

10. What is the Panphenomenalism or Scepticism of Hume? How is it related to the doctrines of Locke and Berkeley?

Wednesday, 5th April 1893.—9 *to* 12 *o'clock.*

1. Distinguish between avoidable and unavoidable imperfections in definitions. Give examples.

2. Give (1) the contradictory; (2) the converse; (3) the contrapositive of the following propositions:—

(*a*) Whatever is, is right.
(*b*) Natives alone can stand the climate.

3. What reference to reality is there in the categorical judgment? Illustrate your answer by reference to the following:—A line is length without breadth; the past is no more; Crusoe saw a footprint on the sand.

4. "Unless it rained, there never was fishing." Can you add minor premises to this, so as to make good these conclusions:—(1) There was fishing; (2) there was no fishing; (3) it rained; (4) it did not rain?

5. Define argument by analogy, and give an example. Why are all such arguments merely probable? How is their degree of probability measured? How may it be increased? What would give certainty to the conclusion in the example you have given?

6. Give a critical account of the methods by which we obtain the data of Psychology.

7. Investigate the effect of Attention on mental states. Distinguish between Passive and Voluntary Attention, and explain exactly what takes place in the latter case.

8. Give a careful statement of the elements involved in our knowledge of space.

9. Explain Locke's purpose in the *Essay*, and the relations of the different Books to his general plan. Give his classification of Ideas (with examples of each class). What does he mean by "the idea of substance in general"?

10. What does Berkeley mean by (*a*) the existence, (*b*) the permanence, (*c*) the causality, of the material world?

MORAL PHILOSOPHY.

Friday, 14th October 1892.—9 *to* 12 *o'clock.*

1. Explain the statement, "An erring conscience is a chimæra."

2. What is the logical process of deciding upon the moral quality of a particular action?

3. How is the conception of Duty treated (*a*) by various Utilitarian writers, (*b*) in doctrines of evolution?

4. Compare the definitions of Desire, Affection, and Will.

5. Examine these statements: "Pleasure is the proper object of desire;" "The strongest motive determines the will."

6. What is strength of will? How is it acquired? How is stubbornness acquired? What bearing have your answers on the question of Freedom?

7. What is the ethical argument for (*a*) Theism, (*b*) Immortality? Distinguish it from the argument of "other-worldliness."

8. Explain in detail, and criticise Mill's conciliation of Egoism and Altruism.

9. Give Plato's account of the cardinal virtues. Compare the ethical doctrines of the Stoics and the Epicureans.

10. On what grounds did Hobbes assert the relativity of morality? Distinguish carefully, and estimate, the methods of reply that have been employed by English moralists.

Thursday, 6*th April* 1893.—9 *to* 12 *o'clock.*

1. Examine the objections that have been taken to introspection (α) as a means of discovering the actual operations of our minds; (β) as a means of discovering the truth or falsity of our beliefs.

2. How far does ethics accept current opinions about what is right and wrong? What are the data of ethics?

3. Explain how conscience is the ultimate criterion of judgments about the moral quality of this or that action. Compare with the ground of our certainty in judging about matters of fact.

4. How are the rights of any one determined? Explain what is meant by the statement that there cannot be a conflict of rights. Make reference to a case in which there seems to be such a conflict.

5. "The only proof that a sound is audible is that people hear it; in like manner, the sole evidence that anything is desirable is that people do actually desire it." Examine this.

6. If we judge a man by his character, how can we say that he is free when he wills?

7. What is meant by pantheism? Give an account of any pantheistic systems with which you are acquainted. What are the special ethical difficulties which they have to encounter?

8. Classify moral sentiments. What influence have they upon action? How far are they good criteria of the moral quality of actions?

9. Examine each of the following statements in Mill's *Utilitarianism*, and compare them:—

> "Each person's happiness is a good to that person, and the general happiness, therefore, a good to the aggregate of all persons."
>
> "Equal amounts of happiness are equally desirable, whether felt by the same or by different persons."

10. Give an account of the ethical doctrines either of Butler *or* of Kant.

POLITICAL ECONOMY.

FIRST PAPER.

Thursday, 30*th March* 1893.—11.30 *to* 1.30 *o'clock.*

(*Answer Eight Questions only.*)

1. Explain the distinction and the relation between Political Economy regarded as a science and as an art.

2. Define the term Capital. Would you include (*a*) land; (*b*) personal skill; (*c*) consols? Explain your reasons.

3. State and examine the Wages Fund theory.

4. What is the economic justification for private property in land?

5. Explain the economic theory of rent. How far does rent enter into cost of production in the case of agricultural produce and minerals respectively in this country?

6. Discuss the effects of the introduction of machinery upon wages.

7. Criticise the proposition that shorter hours of labour by limiting production would raise prices and so increase the rate of wages.

8. Distinguish between total and marginal utility, and explain their bearing upon the law of Demand.

9. Explain and illustrate by curves the theory of the equilibrium of Supply and Demand. What is the difference between temporary and normal equilibrium?

10. Explain and criticise "the tendency of profit to an equality."

SECOND PAPER.

Thursday, 30*th March* 1893.—2.30 *to* 4.30 *o'clock.*

(*Answer Eight Questions only.*)

1. What is Gresham's Law? Illustrate your answer.

2. How is Gresham's Law used by the opponents of Bimetallism, and what is the rejoinder made by supporters of the theory?

3. What are the arguments for and against the introduction of £1 notes into England?

4. What would be the probable effect upon British trade of the adoption of free trade by the United States?

5. Compare the advantages of direct and indirect taxation.

6. Discuss the effects and ultimate incidence of a tax upon ground rents.

7. Define and distinguish Interest and Discount, and explain why the rates of interest and discount may differ for a considerable period.

8. In what circumstances are Import Duties not simply imposed for the purposes of revenue economically justifiable?

9. What are the real limits to a rise of prices through an inflation of credit?

10. Explain the theory of comparative cost under the assumption of two countries and trade in two commodities.

THEORY, HISTORY, AND ART OF EDUCATION.

FIRST PAPER.

Saturday, 25*th March* 1893.—9 *to* 11 *o'clock.*

1. State in specific propositions and criticise Milton's view of the Aim of Education. Distinguish his Realism from that of Comenius.

2. Fully explain and justify from the *Tractate* the statement that Milton's Scheme of Secondary Education is "realistic, encyclopædic, and technical."

3. Summarise the teachings of Comenius on School Discipline as given in the *Great Didactic*.

4. Give an outline of the School system proposed by Comenius. Full details will be expected of one of his educational periods.

5. Give, with sufficient illustration, four of the Principles on the observance on which *sure* learning is represented by Comenius as depending.

6. The "great and dangerous impostor, prejudice"—how may he be known? Shortly explain the two things whereby, according to Locke, a man may acquit himself as an unbiassed lover of truth.

7. Give the substance of Locke's statements on the abuse of words, the danger of "allowing the mind to run after similes," and the proper remedy for Despondency.

8. Contrast Spartan and Athenian Education as regards both Music and Gymnastic.

SECOND PAPER.

(*Six Questions to be answered.*)

Saturday, 25*th March* 1893.—11.30 *to* 1.30 *o'clock.*

1. Show how the *general* Educative process may be deduced from the End of Education as an Ethical End.

2. Give a brief account of the Materials of Education, and indicate, *with reasons*, their relative values for Instruction and Discipline.

3. Explain the Distinction between Sensation, Perception, and Conception, and show, within these limits, the method of the Object Lesson.

4. Elementary Science is of value in school only in so far as it is a training in the *method* of Science. What does this mean?

5. Explain the value of Literature in education, and show how you would examine in a literary lesson in school; and give Quintilian's suggestions as to this.

6. Distinguish between Moral Instruction and Moral Discipline, and show the psychological ground of the distinction.

7. Deduce *any three* Rules of Method from Psychology.

DEPARTMENT OF SCIENCE.

PURE MATHEMATICS.

Tuesday, 11*th October* 1892.—2.30 *to* 4.30 *o'clock.*

1. Prove that the sum of two sides of a triangle is greater than the third side, and that the difference between two sides is less than the third side.

Two points C and D are given on opposite sides of a given straight line AB; find P in AB, such that the difference between PC and PD is as long as possible. Solve the problem if C and D are on the same side of AB.

2. Shew how to construct a triangle equal in area to a given polygon.

ABC is a triangle; D is the projection of B on CA, G the projection of D on BA; and E is the projection of C on BA, F the projection of E on CA, CG and BF meet in O; shew that the areas BOG and COF are equal.

3. Prove that the sum of the squares on the sides of a triangle is double the sum of the squares on half the base and on the median to the base.

P, Q, R are the intersections of the diagonals of the squares described on the sides BC, CA, AB of a triangle ABC, the squares being described all outwardly or all inwardly; show that

$$2AP^2+BC^2=2BQ^2+CA^2=2CR^2+AB^2.$$

4. Prove that the areas of similar triangles are in the duplicate ratio of their homologous sides: and indicate briefly how this result is extended to similar figures in general.

D, E, F are the projections of the vertices of the triangle ABC on the opposite sides: prove geometrically that

$$DEF/ABC=1-\cos^2A-\cos^2B-\cos^2C.$$

5. If the vertical angle of a triangle is bisected, internally or externally, by a straight line which also cuts the base, then the base is divided, internally or externally, in the ratio of the sides of the triangle.

Construct a triangle, given the radius of the circumscribing circle, the vertical angle, and the ratio of the sides.

6. The locus of points of equal potency with respect to two circles is a straight line, perpendicular to the line joining their centres.

Describe a circle with a given radius to pass through a given point and cut a given circle orthogonally.

Or, as an alternative:

Shew that a circle inverts into a circle. Invert the following theorem:—An infinite number of straight lines (viz., its radii) can be drawn cutting a circle orthogonally, and all these lines meet in a single point (viz. the centre).

7. If a straight line is perpendicular to any two lines in a plane that meet it, it is perpendicular to every straight line in the plane that meets it.

Find the locus of all the points in space which are equidistant from three given points, and shew that the perpendiculars to the faces of a tetrahedron through the circumcentres of these faces are concurrent.

8. Define the radian; and shew that it is a constant angle by expressing it in degree measure to the nearest minute.

Two equal circles cut orthogonally. Calculate in terms of the common radius the area by which they overlap.

9. Deduce expressions for the volume and superficial area of the right-circular cylinder; and shew how to extend your result to the oblique cylinder whose right section is circular.

The height of a right circular cone is equal to the diameter of its base; and in it is inscribed a right circular cylinder whose height is also equal to the diameter of its base; calculate the ratio of the volumes of the two solids.

10. The foot of the perpendicular from the focus of a parabola upon any tangent lies on the tangent at the vertex; and the image of the focus in the tangent lies on the directrix.

Given the focus of a parabola, a tangent, and a point on the curve, construct the directrix.

11. Shew that the focal radii at any point of an ellipse make equal angles with the tangent.

Calculate an expression for the square of the normal in terms of the focal radius; and shew that $PG^2=(1-e^2)FP.F'P$, where G is the foot of the normal at P.

12. If abc are the sides of the triangle ABC, and R the radius of its circumscribing circle, shew that

$$a/\sin A=b/\sin B=c/\sin C=2R.$$

Shew also that the circles which pass through any two of the vertices and the orthocentre of the triangle ABC are each equal to the circle circumscribing ABC.

If O be the orthocentre, shew that

$$OA.OB.c+OB.OC.b+OC.OBa.=abc.$$

Wednesday, 12*th October* 1892.—9 *to* 11 *o'clock*.

1. Explain the terms *rational*, *integral*, and *symmetrical* as applied to algebraic functions.

Find the coefficients of x^3 and x^4 in the expansion of

$$(1-ax+bx^2)^3+(1+ax-bx^2)^3.$$

Show that $2z(x-y)^2+2y(z-x)^2+(z+y)(x-y)(z-x)$ is a symmetrical function of x, y, z.

2. Write down a function of x of the third degree which shall vanish when $x=1$, $x=-2$, and have the value 30 when $x=3$.

Find the factors of

(1) $a^2-b^2-c^2+d^2+2(bc-ad)$.

(2) $(x+y)^3+2xy(1-x-y)-1$.

By considerations of symmetry or otherwise, find the two quadratic factors of the expression

$$(yz-x^2)^2+(zx-y^2)^2+(xy-z^2)^2.$$

3. Prove the rule for finding the least common multiple of two or more rational functions.

Find the L.C.M. of x^4+x^2+1, x^6-1, $x^4+x^2(1+x)^2+(x+1)^4$.

Express as a single fraction

$$\frac{1}{x^2-(y-z)^2}+\frac{1}{y^2-(z-x)^2}+\frac{1}{z^2-(x-y)^2}.$$

4. Defining $\sqrt[n]{x}$, where x is positive, as a positive quantity, such that $(\sqrt[n]{x})^n=x$, prove that $\sqrt[n]{a}\sqrt[n]{b}\sqrt[n]{c}=\sqrt[n]{(abc)}$.

Express as a linear irrational function $(y+z-x)(x+y-z)(x+z-y)$, where $x=\sqrt{b}-\sqrt{c}$, $y=\sqrt{c}-\sqrt{a}$, $z=\sqrt{a}-\sqrt{b}$.

5. Find the condition that the equations $Ax+By+C=0$, $A'x+B'y+C'=0$, $A''x+B''y+C''=0$, should be satisfied by the same values of x and y.

Solve the equations

$$(1)\quad \frac{a}{x-a}+\frac{b}{x-b}=\frac{2(a+b)}{x-a-b};$$

$$(2)\quad x^2+xy=4x-2,\ y^2+xy=4y-1.$$

6. Prove that a quadratic equation cannot have more than two roots: and find the condition that x^2+px+q have a positive value for all real values of x.

Trace the graph of $(x^2+x+1)/(x-2)$, and find its maximum and minimum values.

7. Find the sum of a series in geometrical progression, and discuss the case where the number of terms is infinite.

If the amount after n yearly payments of an annuity of £20, payable at the end of each year, reckoning compound interest, convertible annually, at 5 per cent., is £1000, find the present value of the annuity for the same period, and at the same rate of interest.

8. Find the number of r-permutations of n different things, 1st, when repetition is allowed, 2nd, when repetition is not allowed.

There are 10 white balls in a bag numbered 1 to 10, and 5 black balls numbered 11 to 15. Four balls are drawn out one by one: in how many different ways can 1 white and 3 black be drawn, attention being paid to the order of drawing?

9. Define how the function $\log_a x$; and prove that

$$\log_x a-\log_x b=\log_x (a/b),\ \log_x a=1/\log_a x.$$

Find how many years it will take £113 to accumulate to £1808 at compound interest, the rate being 2·4 °/。 convertible annually. (Given $\log 2=\cdot 30103$.)

10. Assuming the addition theorem, express $\sin 2A$, $\cos 2A$, $\tan 3A$, all in terms of $\tan A$.

Simplify $\left\{\sin^2(\tfrac{1}{3}\pi+\theta)-\sin^2(\tfrac{1}{3}\pi-\theta)\right\}/\left\{\cos(\tfrac{1}{3}\pi+\theta)+\cos(\tfrac{1}{3}\pi-\theta)\right\}$.

Find all the angles that satisfy the equation $\cos^3\theta=\sin 2\theta$ (given $\sin 24^\circ\,28'=\cdot 4141638$, $\sin 24^\circ\,24'=\cdot 4144285$.

11. Show that the equation $Ax+By+C=0$ represents, in Cartesian co-ordinates, a straight line.

Find the equations of the perpendiculars from the vertices on the opposite sides of the triangle whose sides are represented by the equations

$$x=4,\ x=y,\ x+2y=1,$$

and show that the perpendiculars meet in a point.

12. Find the equation to the tangent to the ellipse $x^2/a^2+y^2/b^2-1=0$; and show by means of it that the rectangle contained by the perpendiculars from the foci on the tangent is constant.

Monday, 3rd April 1893.—3 *to* 5 *o'clock.*

1. Two triangles are congruent when three sides of the one are respectively equal to three sides of the other.

ABCD is a square, *E*, *F*, *G*, *H*, points in *BC*, *CD*, *DA*, *AB* such that *BF* is perpendicular to *AE*, *CG* perpendicular to *BF*, and *DH* perpendicular to *AE*; shew that the intersections of *AE*, *BF*, *CG*, and *DH* are the vertices of a square.

2. Straight lines which are equal and parallel have equal projections on the same straight line. State a converse or converses to this theorem.

X and *Y* are two given straight lines and *P* is a given point; to draw a straight line of limited length which shall have given projections on *X* and *Y*, which shall (produced if necessary) pass through *P*, and whose middle point shall be at a given distance from *P*.

3. The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

ABCD is a square, and *P*, *Q*, *R*, *S* are the middle points of *AB*, *BC*, *CD*, *DA*; shew that the straight lines *AQ*, *BR*, *CS*, *DP* enclose a square equal to one-fifth of the given square.

4. Find the locus of a point which moves so that the difference of the squares of its distances from two given points is constant.

Shew that the straight lines drawn perpendicular to the opposite sides through the vertices of a triangle are concurrent.

Construct a triangle, given the base, vertical angle, and the difference of the squares on the other two sides.

5. Draw a straight line to touch two given circles.

Draw a secant so that the parts intercepted by two given circles shall be equal.

6. Prove that the rectangle under the segments of any chord of a circle through a given point *O* is constant.

Two circles whose centres are *O* and *O′* intersect in *A*, and the line bisecting *OAO′* meets the circles in *B* and *C*; shew that the intersection of the tangents at *B* and *C* lies on the common chord of the circles.

7. Circumscribe a circle to a given triangle.

E and *F* are the projections of the vertices *B* and *C* of a triangle *ABC* on the sides opposite these vertices. Shew that the straight line through *A* at right angles to *EF* passes through the centre of the circumscribed circle.

8. Give the definition of similar and similarly situated curves.

Shew that the curve similar and similarly situated to a circle is a circle.

The vertex of a triangle is fixed, and its base is a chord of given length in a fixed circle; find the locus of the centroid.

9. In a cyclic quadrilateral the sum of the rectangles contained by pairs of opposite sides is equal to the rectangle contained by the diagonals.

$ABCDEFG$ is a regular heptagon;

shew that $1/AB = 1/AC + 1/AD$.

10. If two intersecting straight lines in space be parallel to two other intersecting straight lines in space, then the angles contained by the two pairs are equal.

Define the angle between two non-intersecting straight lines.

If a straight line be perpendicular to each of two non-intersecting straight lines, it is perpendicular to every plane which is parallel to both.

11. Shew that the locus of the centres of a series of parallel chords in any conic is a straight line.

Given two conjugate diameters and the directrix of a central conic, find its focus.

Or, as an alternative:—

Establish the relation between the ordinate and the vertical abscissa for the principal axis of a parabola.

Given two diameters of a parabola, the directions of the chords which they bisect and also the directrix, to find the focus.

12. Deduce from the theorem $\cos(A+B) = \cos A \cos B - \sin A \sin B$, the theorem $\sin(A-B) = \sin A \cos B - \cos A \sin B$; and shew that $\sin^2 A - \sin^2 B = \sin(A-B)\sin(A+B)$.

Solve the following equations as completely as you can:—

$$\sin^{-1}x = \tan^{-1}x;$$

$$\text{and } 3\sin 2x = 1 + \cos 2x,$$

given $\tan 18°26' = \cdot 3333020$, $\tan 18°27' = \cdot 3336252$.

Tuesday, 4th April 1893.—9 *to* 11 *o'clock.*

1. Shew how to obtain the coefficients of the powers of x in the expansion of $(1+x)^n$ from those in the expansion of $(1+x).^{n-1}$.

Find the co-efficient of x^4 in $(1-x)^8$ and of x^3 in $\left(x - \frac{1}{x}\right)^7$.

If Σ has reference to three variables x, y, z, shew that

$$\Sigma(x^2-yz)^2(z-y) = (x+y+z)\Sigma x^3(z-y) = (x+y+z)^2(y-z)(z-x)(x-y).$$

2. Find the greatest common measure of

$$x^3 - 3x + 2,\ x^5 - 5x + 4, \text{ and } x^7 - 7x + 6.$$

Express as fractions in their lowest terms:—

(1) $\{(1-a^4)(1-b^4)-4a^2b^2\}/\{(1-a^2)(1-b^2)-2a^2b^2\}$;

(2) $$\frac{1-a^2}{(1-bc)^2-(b-c)^2}+\frac{1-b^2}{(1-ca)^2-(c-a)^2}+\frac{1-c^2}{(1-ab)^2-(a-b)^2}.$$

3. Solve the equation $(3\lambda-1)x^2-(2\lambda+1)x+\lambda=0$ and discuss the roots as λ varies from $+\infty$ to $-\infty$.

Solve the following :—

(1) $(x+a)/(x+b)=(2x+a+c)^2/(2x+b+c)^2$;

(2) $$\begin{cases}\left(x+\dfrac{1}{x}\right)\left(y+\dfrac{1}{y}\right)=28,\\[2ex] x^2+\dfrac{1}{x^2}+y^2+\dfrac{1}{y^2}=61.\end{cases}$$

4. Find the sum of

$$\frac{1}{1+\sqrt{2}},\quad \frac{1}{1-\sqrt{2}},\frac{1}{1+\sqrt{3}},\quad \frac{1}{1-\sqrt{3}}$$

If $x=\sqrt{b}+\sqrt{c}-\sqrt{a}$, $y=\sqrt{c}+\sqrt{a}-\sqrt{b}$, $z=\sqrt{a}+\sqrt{b}-\sqrt{c}$, and $u=\sqrt{a}+\sqrt{\ }+b\sqrt{c}$, find the product $xyzu$, and shew also that

$$(xu+yz)(yu+xz)(zu+xy)=64\,abc.$$

5. Sum to n terms the following series :—

(i) $a+(a+b)+(a+2b)+(a+3b)+\ldots\ldots$

(ii) $a+(a+b)r+(a+2b)r^2+(a+3b)r^3+\ldots\ldots$

Find the present value of an annuity of £12 to be paid for 20 years, allowing compound interest at 5 per cent., and assuming that the first payment is due at the end of the first year.

Given $\log 1{\cdot}05={\cdot}0211893$ and $\log 2{\cdot}6532={\cdot}42378$.

6. Shew that, if any complex number be a root of an equation having real coefficients, then the conjugate complex number is a root of the same equation.

Simplify $$\left(\frac{\cos\phi+i\sin\phi}{\sin\phi+i\cos\phi}\right)^2+\left(\frac{\cos\phi-i\sin\phi}{\sin\phi-i\cos\phi}\right)^2;$$

and write down the three cube roots of

$$(\cos\theta+\cos\phi)+i(\sin\theta+\sin\phi).$$

Or, as an alternative :—

Explain what is meant by the Convergency or Divergency of an Infinite Series. Give an example of a series which is neither convergent nor divergent.

Discuss the convergency of $\Sigma x^n/n$ and $\Sigma(n+1)x^n/(n^3-1)$ for all values of x.

7. Explain how a locus is specified analytically; and how to find analytically the intersection of two loci.

Trace the curves determined by the following equations :—

$$(x-1)^2y=(x-2)(x-3)\ ;\ y^2\sin^2x=\cos x.$$

Or, as an alternative :—

Shew that $L(x^m-1)/(x-1)=m$ when $x=1$

Evaluate

$$L(x^4-3x^3+x^2+4)/(x^3-3x^2+4) \text{ when } x=2$$

$$\text{and } L\{\sqrt{(x+1)}+\sqrt[3]{(x+1)}-2\}/\{\sqrt{(x+1)}-1\}, \text{when } x=0.$$

8. Write down the expression for all the angles which have a given tangent.

Find the value of $\tan\theta$ if

$$\cos(\alpha-\beta)\sin(\gamma-\theta)=\cos(\alpha+\beta)\sin(\gamma+\theta).$$

If α, β, γ be any three unequal angles, shew that

$$\tan(\alpha-\beta)+\tan(\beta-\gamma)+\tan(\gamma-\alpha)$$
$$=\tan(\alpha-\beta)\tan(\beta-\gamma)\tan(\gamma-\alpha).$$

9. Obtain logarithmic formulae for calculating the distances of the centre of an escribed circle of a triangle from the vertices, given the side which the circle touches internally and also the two adjacent angles.

If r, r_1, r_2, r_3, s and R have the usual meanings, shew that

$$1/r_1+1/r_2+1/r_3=1/r\ ;$$

$$\text{and } r_1\sin A+r_2\sin B+r_3\sin C=2s(1-r/2R).$$

10. Shew that the projection of the normal at any point of a conic section on the focal radius is constant.

Shew that the locus of the projection of the foot of the normal to a parabola on the corresponding focal radius is a curve whose cartesian equation is of the fourth degree.

Or, as an alternative :—

If A, G, H be the Arithmetic, Geometric, and Harmonic means between two positive quantities, show that $A>G>H$.

x, y, z being three positive quantities not all equal, shew that $\Sigma x^2>\Sigma xy$ and $\Sigma x^3>3xyz$.

11. Shew that an equation of the first degree represents a straight line ; and interpret the constants when the equation is thrown into the form $x/a+y/b-1=0$.

Find the equation of a straight line which passes through the point (p, q) and includes a given area $\triangle$ with the co-ordinate axes.

12. Find the equation to the tangent at any point, P, on the ellipse $x^3/a^2+y^2/b^2-1=0$.

Shew by means of your equation that, if N be the projection of the point P on the major-axis, T the point where the tangent meets the major-axis, and O the centre, then $ON\cdot OT=a^2$.

NATURAL PHILOSOPHY.

Thursday, 13*th October* 1892.—1 *to* 4 *o'clock.*

[*Six questions, at most, to be answered under each of* **A** *and* **B**, *and the answers to be made up in separate packets marked* **A** *and* **B** *respectively.*]

A

1. Prove the proposition known as the triangle of velocities.

The simultaneous velocities of a point O are represented by OA, OB, OC; show that their resultant is the same as that of velocities OD, OE, OF, where D, E, F are the points of bisection of BC, CA, AB. Hence show that the resultant of OA, OB, OC is $3OG$, where G is the mean centre of the triangle ABC.

2. A particle is projected with a velocity of 100 feet per second, at an elevation of 60°, find the vertical and horizontal ranges, neglecting the resistance of the air.

3. Find the average force under which a mass of 20 lbs. will acquire a speed of 100 feet per second in $0^{s}\cdot001$, and find through what space this force must act. State the units in which your answers are given.

4. Define a Field of Force and a Line of Force.

Draw the lines of force (1) in a uniform field of force, (2) in a field of force due to two equal fixed centres of force attracting directly as the distance.

5. Two equal uniform ladders, hinged together at their upper extremities, stand on a rough horizontal plane. If the ladders are on the point of slipping when the angle between them is 60°, find the coefficient of friction of the plane.

6. Find the radius of a homogeneous sphere of lead so that its attraction upon a particle upon its surface may be 0·000001 of the weight of the particle. [Density of lead is twice mean density of earth; radius of earth $= 21 \times 10^6$].

7. Define the term Moment of Inertia, and explain some of its uses.

A circular hoop rolls down an inclined plane under gravity; how would you measure its total kinetic energy at any time?

8. Define Simple Harmonic Motion, and show that when a particle executes a S. H. M. the acceleration is at any instant proportional to the displacement.

9. A hollow cylinder, 2 feet in diameter and 4 feet in length, has its axis horizontal. Find the pressure on one end when the cylinder is full of water, weighing 62·5 pounds per cubic foot.

10. A solid homogeneous cylinder floats in equilibrium in water with its axis vertical. Investigate the condition that its equilibrium shall be stable. How would it affect its stability if a circular hole were bored symmetrically in the cylinder?

11. Prove, in any manner, from Kepler's first and second laws, that the attraction of the sun upon a planet is central, and inversely as the square of the distance.

12. Explain the retrograde motions of the planets.

Two points describe circular orbits uniformly about the same centre, the ratio of the radii of the orbits being 1 : 2, and of the angular velocity in the orbits 3 : 1. Find the stationary points of either as seen from the other.

B

13. Define Viscosity, and explain its nature. Mention some ordinary phenomena due to viscosity in air, and in water.

14. Define Rigidity, and show how it can be measured by the torsion of a wire.

15. Calculate the period of vibration of the note of an open organ-pipe 12 feet long. What would be the change if the pipe were closed at the top, and filled with hydrogen?

16. State Boyle's Law, and point out within what limits it fairly represents the results of accurate experiments on isothermal compression of air.

17. Mention some proofs of the existence of surface-tension in liquids, and show how its amount can be ascertained in the case of water.

18. Explain the action of a single lens, employed as a magnifier:—and show how to calculate its magnifying power.

19. Point out how we can determine the rate at which Sirius is receding from the Sun.

20. If equal bulks, of water at 10°C and of mercury at -20°C, be poured into a non-conducting vessel, what will be the common temperature? [Take the density of mercury as 13·6, and its specific heat as 0·033.]

21. Define the Potential of an electric conductor:—and describe, in general terms, one process for measuring it.

22. Point out the true function of a lightning-rod, and the chief precautions necessary to its efficiency.

23. What is the cause of the essential difference, between an air line and a submarine cable, as regards the transmission of electric signals? How can a fault in a cable be "located"?

24. Compare the currents which pass through a cell, whose internal resistance is 1, and whose poles are connected by wires of resistances 2, 3, 4, respectively; when these are placed (1) end to end, (2) side by side.

[*For the Neil-Arnott Prize, the following questions are to be answered in addition to eight* (*at most*) *of the preceding.*]

α. What is meant by the *punctum cæcum?* Describe a simple mode of testing its existence.

β. Show how to calculate the pressure required to burst a spherical bag of given uniform material.

γ. What are *Isobars*, and what information can we derive from a chart on which they are laid down?

δ. What principles are involved in the action of the *Stethoscope*?

ε. State the chief arguments in favour of the Kinetic theory of gases, especially from the experimental side.

Wednesday, 5th April 1893.—1 *to* 4 *o'clock.*

[*Six Questions, at most, to be answered under each of* A *and* B.]

A.

1. What is meant by the term Stress? Apply the conception to the elucidation of Newton's III. Law of Motion, and point out the class of problems for which such a law is necessary and sufficient.

2. A ball of 40 lbs. is fired horizontally from a cannon, with an initial speed of 1120 feet per second. The mass of the cannon and carriage is 20 tons. Find the speed of recoil and the kinetic energies of the cannon and ball immediately after the discharge.

3. Point out the relation subsisting between

(1) Momentum and velocity;
(2) Force and acceleration;
(3) Couple and angular acceleration.

4. Define Simple Harmonic Motion of a particle, and show that the force acting on the particle, in any position, is directly proportional to the displacement from mid-range.

5. Find the direction and magnitude of the force required to make a particle of given mass move with given uniform speed in a circle of given radius. Hence, assuming the law of gravitation, calculate the periodic time of a satellite revolving round the earth, at a distance of 1000 miles above the surface. [Earth's radius = 4000 miles.]

6. Assuming the results of the two preceding questions, show how to find the length of the seconds' pendulum, when the acceleration due to gravity is given.

7. What are the conditions that a rigid body may be in equilibrium under the action of given forces.

A rod, 4 feet long, hung by its middle point, rests horizontal when weights of 1 and 3 lbs. act at its ends. If the positions of the weights be interchanged, the rod is brought back to its horizontal position when the point of suspension is shifted 1 foot towards one end. Find the weight of the rod and the position of its centre of gravity.

8. State the steps of the reasoning by which Newton deduced the law of universal gravitation from Kepler's laws of planetary motion.

9. What are the principal causes which affect the *weight* of a body as it is taken from place to place on the earth's surface? Calculate the weight of a standard pound at the surface of a minor planet of 100 miles diameter and mean density 11. [Density of earth = $5\frac{1}{2}$.]

10. Prove that the path of a projectile under the sole action of gravity is a parabola; and show that in general, for a given origin and given speed of projection, there are two paths by which any accessible point may be reached.

11. Prove that the resultant pressure acting on the surface of a body, wholly or partially immersed in a fluid at rest, is equal to the weight of the fluid displaced.

The apparent weight of a body, as tested by a spring balance, is 3 lbs. when the body is half immersed in water, and 1 lb. when it is three-quarters immersed. Find the weight and the specific gravity of the body.

12. What are the Annual Parallax and Aberration of a star? Point out clearly how they are caused; in particular, show by means of diagrams what their respective effects are, during the course of one year, upon the real position of a star situated in the pole of the ecliptic.

B.

1. Explain the principle of contour lines, and give examples. Shew how the same principle is applied in the case of (*a*), isobars, (*b*), isothermals of a gas, (*c*), equipotential lines in a conducting plate.

2. Prove that the speed of a gas, under constant pressure, through a small hole in the wall of a vessel, varies inversely as the square root of the density of the gas.

3. Define the compressibility of a liquid. The compressibilities of two liquids are in the ratio 1 : 2, and their densities in the ratio 1 : 3, compare the velocities of sound in the two liquids.

4. An organ-pipe sounds a certain note at temperature 0° C. At what temperature will it sound a note with 5/4 times the number of vibrations per second?

5. Explain what is meant by an achromatic combination of lenses, and show how a combination of two lenses may be made approximately achromatic.

6. Explain, fully, any one method of measuring the wave-length of homogeneous light; pointing out the physical or kinematical basis of the process adopted.

7. Explain how spectrum analysis may be applied to obtain information about (1) the constitution or materials of a comet; (2) whether it is approaching to, or receding from the earth.

8. Define the terms Specific, and Latent, Heat. What mass of steam at 100° C. will reduce 10 lbs. of ice at 0° to water at 25° C.? [The latent heat of water is taken as 80 units, and of steam as 537.]

9. Explain why the specific heat of air at constant volume is less than its specific heat at constant pressure. Describe any process for ascertaining the specific heat at constant pressure.

10. Describe any form of electrical condenser, and define what is called its Capacity. Show how the energy of a charge depends on the quantity of the charge and on the capacity of the condenser.

11. Define the term Line of Magnetic Force, and state, generally, how such lines indicate the intensity at any point in a magnetic field.

Point out how lines of terrestrial magnetic force are directed, at different parts of the earth's surface.

12. State the relation known as Ohm's Law, defining the quantities involved. A galvanometer coil has a resistance of 125 Ohms; calculate the resistance of a wire which will shunt off nine-tenths of the main current from the galvanometer.

ASTRONOMY.

FIRST PAPER.

Thursday, 30*th March* 1893.—11.30 *to* 1.30 *o'clock.*

1. How are the wire intervals in a transit instrument determined.
2. Shew how the error of azimuth of a transit instrument is found by observations of the Pole Star.
3. Explain the principle of collimation, and describe the various methods of determining the error of collimation of a transit instrument.
4. Explain the process by which the absolute Right Ascension of a Standard Star is found by observations of that Star and of the Sun.

SECOND PAPER.

Thursday, 30*th March* 1893.—2.30 *to* 4.30 *o'clock.*

1. Define the "elements" of a planetary orbit.
2. Show the method by which an ephemeris is computed from given elements, explaining precisely how the true anomaly is found in the ellipse and in the parabola.
3. Give the leading features of Olbers' method of finding the orbit of a comet from three observed places.
4. Develop the fundamental formulae for predicting an occultation of a fixed star by the moon for a given place on the earth.

For Examination Papers on CHEMISTRY, BOTANY, and GEOLOGY, see Examination Papers in FACULTY OF MEDICINE.

DEPARTMENT OF HISTORY AND LAW.

HISTORY.

FIRST PAPER.

Wednesday, 29*th March* 1893.—2.30 *to* 4.30 *o'clock.*

(*Five Questions only to be answered.*)

1. What do you understand by the "Revolution Settlement"? How far did it modify the nature of the kingship?
2. State briefly the provisions and explain the objects of (*a*) The Mutiny Act, (*b*) The Toleration Act.
3. Sketch the character and policy of William III.
4. Trace in outline the chief events of the war with France from 1702 to 1713, and explain the nature of the Treaty of Utrecht.

5. Explain and criticise (*a*) The Septennial Act, and (*b*) The Peerage Bill.

6. Describe briefly the Ministry of Sir Robert Walpole (1721-42), *or* that of William Pitt (1756-61).

7. Translate and explain *any three* of the following passages :—

(1.) Rex Christianissimus promittit quod nulla omnino ratione perturbabit praedictum Regem Magnae Britanniae nec quoque modo favebit conspirationibus contra praedictum Regem.

(2.) Il est à craindre qu'après ma mort on regardera mes fils comme des estrangers, et dont l'ainé est beaucoup plus accoutumé à trancher en souverain que le pauvre prince de Galles, qui est trop jeune pour profiter de l'exemple du roy de France.

(3.) La Compagnie de l'Assiento payera de châque Nègre, Pieza de India, la somme de trente-trois Escudos. . . . Lesdits Assientistes avanceront à Sa Majesté Catholique la somme de deux cent mille Escudos. . . . Toujours à condition qu'ils ne causent aucun scandale à la Religion Catholique Romaine.

(4.) Le Landgrave de Hesse-Cassel tiendra prêt pour le service de Sa Majesté le Roi de la Grande-Bretagne un corps de 8000 Fantassins et 4000 Chevaux : lequel corps sera employé lors que Sa Majesté le requerra, dans tous les lieux où il en sera besoin.

SECOND PAPER.

Thursday, 30*th March* 1893.—9 *to* 11 *o'clock.*

(*Five Questions only to be answered.*)

1. What was the position of the kingship at the accession of George III. ?

2. Explain the nature and effects of the Peace of Paris (1763).

3. What important events hinge on No. 45 of the *North Briton*?

4. Sketch and discuss the chief events which led to the American Revolution.

5. Explain and criticise—"The power of the Crown has increased, is increasing, and ought to be diminished" (1780).

6. Explain briefly the nature of (*a*) the economic reform, and (*b*) the Parliamentary reform proposed by Wilkes, Burke, Pitt, and others.

7. Trace in outline the history of the younger Pitt's Ministry (1784-1801), and give an estimate of his character.

8. Translate and explain *any two* of the following passages :—

(1) Lorsque le Sieur Pitt quitta le ministère, sa place fut donnée à l'Ecossais Bute. Ce ministre Anglais rompit toutes les liaisons qui subsistoient entre nos deux cours. . . . Comme il n'y aura jamais moyen de parvenir en règle avec le Comte de Bute, vous ne perdrez aucune occasion pour brouiller sous main la nation contre lui. (*Fédéric.*)

(2) Il faut donc que la France, si elle veut achever cette révolution, fournisse à ce peuple tout ce qui est nécessaire, pour qu'il ne trouve pas la guerre trop dure. Il lui en coûtera sans doute quelques millions ;

mais elle en sera bien dédommagée par l'anéantissement de la puissance de l'Angleterre.

(3) *Impératrice* (avec une extréme vivacité).—Je vous donne ma parole d'Impératrice que je n'ai jamais eu de l'inclination pour les Français . . . cependant ils ont eu à mon égard des attentions bien plus marquées que vous autres.

Harris.—Ils n'ont eu, Madame, que leurs intérêts en vue ; leur politesse est toujours suspecte.

ART AND ARCHÆOLOGY.

FIRST PAPER—HISTORICAL.

Wednesday, 29*th March* 1893.—9 *to* 11 *o'clock.*

(*Not more than Seven Questions to be attempted.*)

1. Describe the chief classes of remains left by European peoples in the neolithic stages of civilisation. In what countries are they mostly found? Mention any indications they afford of the habits of life, religious beliefs, and burial customs, of their makers.

2. "Bronze was the active civilising agent in antiquity." Illustrate this statement with relation (1) to theories of the origin and development of the bronze industry, and (2) to evidence of the actual use of bronze in early monuments.

3. Indicate briefly the probable plan and chief features of ancient palaces built in Egypt, Assyria, and in the neighbourhood of the shores of the Ægean respectively, and refer to existing ruins.

Or,

Describe Solomon's Temple, and indicate its relation to other religious edifices of the same period.

4. Discuss the artistic character and importance of the Phœnicians.

5. Write a notice of Kalamis and Myron, and fix their place in the development of Greek sculpture. Describe and criticise minutely the Discobolus.

6. Who were the chief sculptors and other artists about the time of Alexander the Great? Where did they work? What common characteristics did their art possess? What are the chief existing remains of their work?

7. In what respects did the structures of Imperial Rome represent; (1) Native Italian; (2) Greek; and (3) Oriental-Hellenistic traditions of building?

8. Do you know of any Pagan customs, traditions, or beliefs, maintained by the early Christians, and manifested in early Christian architecture and other arts?

At Silchester there have recently been excavated the ruins of a Roman basilica, and of what appears to be a small Christian Church. What would you expect these to be like in plan and general arrangements?

9. Contrast the history and civic life of Venice with those of Florence, and illustrate from this point of view, with reference to examples, the difference between Venetian and Florentine painting.

10. How are the great artistic and intellectual developments of Western Europe in the thirteenth century to be accounted for? Indicate why it was that, at that time, all the arts were under the dominating influence of architecture.'

11. Describe the group of mediæval buildings at Pisa, with an especial notice of the Campo Santo, and of any one of the frescoes there displayed. What parallels can be brought forward from other times and countries to the decoration of this structure?

12. Masaccio, and his place in the history of Italian painting.

13. Describe and contrast the aims and condition of art in the France of the time of Louis XIV., and in the Florence of the fourteenth century.

SECOND PAPER—CRITICAL AND TECHNICAL.

Wednesday, 29*th March* 1893.—11.30. *to* 1.30 *o'clock.*

(*No more than Seven Questions to be attempted*, *but each Candidate must attempt Question* 1.)

1. Name some of the more important "conditions of formal beauty in composition," and discuss in this connection the quality of "breadth" in works of Architecture, Sculpture, and Painting.

2. Discuss impartially the chief artistic movements of the present century, and give your view of the style of painting termed "Impressionism."

3. How would the nature of the material employed influence an artist in designing a figure to be made respectively in granite, marble, bronze, and terra-cotta?

4. State the chief points of excellence in the rendering of the nude by Greek sculptors, and explain clearly the suitability of the Greek dress for sculpturesque treatment.

5. Indicate a few of the forms derived from architecture in wood which were adopted by the early builders of stone edifices.

6. Write a brief history of the Arch from the earliest times up to the beginning of the 13th century A.D.

7. Explain the special interest, from the point of view of construction, of the Gothic Churches of Central France, and show the relation to construction of the main features of the buildings.

8. Give, as nearly as you can in his own words, Vasari's comparison of fresco with oil painting, and comment thereon.

9. Write a critical analysis of the scheme of decoration employed by the Greeks on different forms of painted vases of the best style.

10. Explain the scheme of decoration of the Vault of the Sistine Chapel, and the scheme of Tintoret's "Paradise," and contrast the principles displayed in them with those prevailing in early Christian and Mediæval Art.

11. Compare the methods in oil-painting of Correggio and Rubens; what are the chief advantages and disadvantages of each?

12. Explain the terms "a fresco," "a secco," "rappresentazione," "glazing," "dragging," "cire perdue," "embossing," "chasing," "intrados," "scotia," "torus," "string-course," "lateral thrust," "stilted arch," "the classical orders."

ROMAN LAW.

FIRST PAPER—HISTORICAL.

25*th March* 1893.—9 *to* 11 *o'clock.*

1. Give some account of the following *leges*:—*Lex Canuleia*, *lex Hortensia*, *lex Poetilia.*

2. What were the principal sources of the law from (*a*) the foundation of Rome to the enactment of the XII. Tables; and from (*b*) the close of the Republic till the accession of Diocletian?

3. Mention some of the effects upon the private law of the establishment of his valuation roll by Servius Tullius.

4. In what way did the praetor make his influence felt in modifying the law? Was *jus facere* within his province?

5. What were the *responsa prudentium*, and what was their authority? How far were they affected by the so-called Valentinian Law of Citations?

6. Give an account of the history and literary work of Gaius.

7. There are numerous examples in the Digest of what the jurists call *Emblemata Triboniani*; what were they? What were the *Quinquaginta decisiones*?

8. What were the Gregorian and Hermogenian Codes, the Edictum Theodorici, and the Breviarium Alaricianum?

9. Explain the nature of *Manus*, the relation it held to marriage, the ways in which it was constituted, its effects, and the causes of its disappearance from the later law.

10. What were the disabilities of Junian Latins?

SECOND PAPER—DOCTRINAL.

1. In what ways could *legitimatio* be effected in the time of Justinian? Distinguish between *liberi legitimi*, *spurii*, and *naturales* respectively.

2. Explain how *Emancipatio* was effected both in the classical and the Justinianian law. What was *Emancipatio Anastasiana*?

3. What changes in the law were made by Justinian as regards the adoption of *filiifamilias*?

4. What do you understand by the *auctoritas* of a tutor? How was it interponed?

5. Mention the general classification of "things" given by Gaius and Justinian in their respective Institutes.

6. Explain and illustrate *alluvio* and *specificatio* as modes of acquiring property.

7. Distinguish between urban and rural servitudes. How might a servitude of *actus* and a servitude *altius non tollendi* be constituted?

8. What is meant by a *justa causa usucapionis*?

9. Explain the rules applicable to *donatio inter vivos*.

10. Translate and explain: "Pessima itaque libertas eorum est qui dediticiorum numero sunt; nec ulla lege aut senatusconsulto aut constitutione principali aditus illis ad civitatem Romanam datur. Quin et in urbe Roma vel intra centesimum urbis Romae milarium morari prohibentur, et si contra fecerint, ipsi bonaque eorum publice venire jubentur ea condicione, ut ne in urbe vel intra centesimum urbis Romae milarium serviant, neve unquam manumittantur."—(GAL. I. 26-27.)

EXAMINATION PAPERS FOR DEGREE OF M.A. WITH HONOURS.

A.—DEPARTMENT OF CLASSICAL LITERATURE.

LATIN.

Friday, 7th April 1893.—9 *to* 12 *o'clock.*

I. For Latin Prose :—

The day on which the Houses met again is one of the most remarkable epochs in our history. From that day dates the corporate existence of the two great parties which have ever since alternately governed the country. In one sense indeed the distinction which then became obvious had always existed, and always must exist. For it has its origin in diversities of temper and of interest, which are found in all societies, and which will be found till the human mind ceases to be drawn in opposite directions by the charm of habit and the charm of novelty. Not only in politics, but in literature, in art, and in science we find this distinction. Everywhere there is a class of men who cling with fondness to whatever is ancient, and who, even when convinced by overpowering reasons that innovation would be beneficial, consent to it with many misgivings and forebodings. We find also everywhere another class of men, sanguine in hope, bold in speculation, quick to discern the imperfections of whatever exists, and disposed to think lightly of the risks and inconveniences which attend improvements. In the sentiments of both classes there is something to approve. But of both the best specimens will be found not far from the common frontier. The extreme section of one class consists of bigoted dotards: the extreme section of the other consists of shallow and reckless empirics.—MACAULAY.

II. Translate *Lucret.* v. 703-12, *from* "Luna potest" *to* "sub sole tenere."

2. Cum Achaeorum maxime gente reconciliandae gratiae viam quaerebat. Haec una ex omni Graecia gens et Atheniensium civitas eo processerat irarum, ut finibus interdiceret Macedonibus. Itaque servitiis ex Achaia fugientibus receptaculum Macedonia erat, quia, cum finibus suis interdixissent, intrare regni terminos ipsi non audebant. Id cum Perseus animadvertisset, comprehensis omnibus, litteras ad Achaeos misit, quibus se servos qui ad se transfugissent benigne remittere illis scripsit. Ceterum ne similis fuga servorum postea fieret, cogitandum et illis esse. Recitatis his litteris per Xenarchum praetorem qui privatae gratiae aditum apud regem quaerebat, et plerisque moderate et benigne scriptas esse censentibus litteras, atque iis maxume qui praeter spem recepturi essent amissa mancipia, Callicrates ex iis qui in eo verti salutem gentis crederent si cum Romanis inviolatum foedus servaretur, "parva" iniquit "aut mediocris res, Achaei, quibusdam videtur agi; ego maximam gravissimamque omnium non agi tantum arbitror, sed quodam modo actam esse. Nam qui regibus Macedonum Macedonibusque ipsis finibus interdixissemus, manereque [censuissemus] id decretum scilicet, ne legatos, ne nuntios admitteremus regum, per quos aliquorum ex nobis animi sollicitarentur, ii contionantem quodam modo absentem audimus regem et, si dis placet, orationem eius probamus. Et cum ferae bestiae cibum ad fraudem suam positum plerumque aspernentur et refugiant, nos caeci specie parvi beneficii inescamur et servolorum minimi pretii recipiendorum spe nostram ipsorum libertatem subrui et temptari patimur.

Friday, 7th April 1893.—1 *to* 4 *o'clock.*

Translate, with short notes where necessary:—

1. Plautus, *Most.* v. i., *from* "Qui homo," *to* "clam senem."

2. Horace, *Odes* i. 34, *from* "Parcus deorum," *to* "hic posuisse gaudet."

3. Propertius, iv. i. 7-18, *from* "A valeat, Phoebum," *to* "pagina nostra via."

4. Juvenal, viii. 198-210, *from* "Res haud mira," *to* "pugnare secutor."

5. Cic. *de Orat.* ii. 26, §§ 110-112, *from* "Sed in eo genere," *to* "controversia separatum est."

6. Tacitus, *Hist.* ii. 77, *from* "Nobis nihil ultra adrogabo," *to* "desciverunt."

Saturday, 8th April 1893.—9 *to* 12 *o'clock.*

1. Translate and comment on the following, explaining any difficulties of construction or sense:—

(*a*) Quid? qua de re inter Marcellos et Claudios patricios centum viri iudicarunt, quum Marcelli ab liberti filio stirpe, Claudii patricii eiusdem hominis hereditatem gente ad se dicerent redisse, nonne in ea causa fuit oratoribus de toto stirpis et gentilitatis iure dicendum?

(*b*) Nam si quisque, ut in aliqua arte et facultate excellens aliam quoque artem sibi adsumpserit, is perficiet, ut, quod praeterea sciet, id eius, in quo excellet, pars quaedam esse videatur, licet ista ratione dicamus pila bene et duodecim scriptis ludere proprium esse iuris civilis, quoniam utrumque eorum P. Mucius optime fecerit.

(*c*) Vitellius ministeria principatus per libertos agi solita in equites Romanos disponit; vacationes centurionibus ex fisco numerat.

(*d*) Sed gloria operis libertati reservata: pulsis regibus Horatius Pulvillus iterum consul dedicavit, ea magnificentia quam immensae postea populi Romanae opes ornarent potius quam augerent. Isdem rursus vestigiis situm est, postquam interiecto quadringentorum quindecim annorum spatio L. Scipione C. Norbano consulibus flagraverat. Curam victor Sulla suscepit, neque tamen dedicavit; hoc solum felicitati eius negatum. Lutatii Catuli nomen inter tot Caesarum opera usque ad Vitellium permansit. Ea tunc aedes cremabatur.

(*e*) O Gripe Gripe, in aetate hominum plurumae
Fiunt transennae, ubi decipiuntur dolis.
Atque edepol in eas plerumque esca inponitur,
Quam si quis avidus poscit escam avariter,
Decipitur in transenna avaritia sua.
Ille qui consulte docte atque astute cavet,
Diutine uti bene licet partum bene.

(*f*) Principio magnus caeli si vertitur orbis,
Ex utraque polum parti premere aëra nobis
Dicendum est extraque tenere et claudere utrimque;
Inde alium supra fluere atque intendere eodem
Quo volvenda micant aeterni sidera mundi;
Aut alium subter, contra qui subvehat orbem;
Ut fluvios versare rotas atque austra videmus.

(*g*) Tum penuria deinde cibi languentia leto
Membra dabat, contra nunc rerum copia mersat.
Illi imprudentes ipsi sibi saepe venenum
Vergebant, medici nunc dant sollertius usi.

(*h*) Quanta per Idaeos saevis effusa Mycenis
Tempestas ierit campos, quibus actus uterque
Eŭropae atque Asiae fatis concurrerit orbis
Audiit, et si quem tellus extrema refuso
Submovet Oceano, et si quem extenta plagarum
Quattuor in medio dirimit plaga solis iniqui.

(*i*) Dixerat. Ille Iovis monitis immota tenebat
Lumina, et obnixus curam sub corde premebat.
Tandem pauca refert: Ego te, quae plurima fando
Enumerare vales, nunquam, Regina, negabo
Promeritam; nec me meminisse pigebit Elissae,

Dum memor ipse mei, dum spiritus hos regit artus.
Pro re pauca loquar. Neque ego hanc abscondere furto
Speravi, ne finge, fugam, nec coniugis unquam
Praetendi taedas aut haec in foedera veni.

(*k*) Martiis caelebs quid agam Calendis,
Quid velint flores, et acerra thuris
Plena miraris, positusque carbo in
Cespite vivo,
Docte sermones utriusque linguae.

(*l*) Sed nec structor erit cui cedere debeat omnis
Pergula, discipulus Trypheri doctoris, apud quem
Sumine cum magno, lepus atque aper et pygargus
Et Scythicae volucres et phoenicopterus ingens
Et Gaetulus oryx hebeti lautissima ferro
Caeditur et tota sonat ulmea cena Subura.

2. Answer any *three* of the following questions :—

(*a*) Trace the history of Comedy at Rome up to the time of Plautus.

(*b*) Discuss the poem of Lucretius as a literary work of art. How far does he get over the difficulties involved in his choice of subject?

(*c*) "Age vero, inquit Antonius, qualis oratoris et quanti hominis in dicendo putas esse historiam scribere?" Discuss this question, drawing illustrations from Roman writers.

(*d*) Give a short account of the principal Roman elegiac poets. Explain and illustrate the merits and defects of the elegiac couplet as a literary form, showing the class of subject to which it should be applied.

(*e*) Trace the origin and development of Roman Satire.

3. Answer any *two* of the following :—

(*a*) Explain carefully the causes and results *either* of the expulsion of the Kings, *or* of the appointment of the Decemviri.

(*b*) Sketch the process of the extension of the Roman power in Italy up to the end of the Great Latin War.

(*c*) Describe the condition, government, and administration of any one province under Augustus.

(*d*) Give a short narrative, with dates, of the wars of conquest under Augustus referred to in the Odes of Horace.

GREEK.

Saturday, 8*th April* 1893.—1 *to* 4 *o'clock.*

I. Translate, with very short notes where necessary :—

(1) Homer, *Odyssey*, xix. 220-240, *from* "Τὴν δ' ἀπαμειβόμενος," *to* "Ἀχαιῶν ἦσαν ὁμοῖοι."

Write notes on ἀμφίς, ἰνδάλλεται, λάων.

(2) Aeschylus, *Septem C. Thebas*, 828-854, *from* "ὦ μέλαινα," *to* "ἀφανῆ τε χέρσον."

(3) Pindar, *Isthmia*, v. [vi.] 19-35, *from* "ὔμμε τ', ὦ χρυσάρματοι," *to* "Ἡρακλέης."

Explain the mythical allusions.

(4) Plato, *Phaedo*, 101 B.-102 A., *from* "Τί δέ," *to* "λέγω ποιοῖς."

(5) Arist., *Nic. Ethics*, iii. 3, §§ 15-18, *from* "Ἔοικε δή," *to* "κατὰ ὴν βούλευσιν."

Show how the illustration applies.

Unseen Passage.

II. Translate :—

Thucyd., v. 89-91, *from* "ΑΘ. Ἡμεῖς τοίνυν," *to* "κρατήσωσι."

Monday, 10*th April* 1893.—9 *to* 12 *o'clock.*

1. For Greek Prose :—

A perfect democracy is the most shameless thing in the world. As it is the most shameless, it is also the most fearless. No man apprehends in his person he can be made subject to punishment. Certainly the people at large never ought : for as all punishments are for example towards the conservation of the people at large, the people at large can never become the subject of punishment by any human hand. It is therefore of infinite importance that they should not be suffered to imagine that their will, any more than that of kings, is the standard of right and wrong. They ought to be persuaded that they are full as little entitled, and far less qualified, with safety to themselves, to use any arbitrary power whatsoever ; that, therefore, they are not, under a false show of liberty, but, in truth, to exercise an unnatural perverted domination, tyrannically to exact, from those who officiate in the state, not an entire devotion to their interest, which is their right, but an abject submission to their occasional will ; extinguishing thereby, in all those who serve them, all principle, all sense of dignity, all use of judgment, and all consistency of character, whilst by the very same process they give themselves up a proper, a suitable, but a most contemptible prey to the servile ambition of popular sycophants or courtly flatterers.—BURKE.

Unseen Passage.

2. Translate into English :—

[*The speaker is Copreus, the herald of Eurystheus.*]

πολλῶν δὲ κἄλλων ἑστίας ἀφιγμένων,
ἐν τοῖσιν αὐτοῖς τοισίδ' ἕσταμεν λόγοις,
κοὐδεὶς ἐτόλμησ' ἴδια προσθέσθαι κακά.
ἀλλ' ἤ τιν' ἐς σὲ μωρίαν ἐσκεμμένοι
δεῦρ' ἦλθον, ἢ κίνδυνον ἐξ ἀμηχάνων
ῥίπτοντες, εἴτ' οὖν εἴτε μὴ γενήσεται·

οὐ γὰρ φρενήρη γ' ὄντα σ' ἐλπίζουσί που
μόνον τοσαύτης ἣν ἐπῆλθον Ἑλλάδος
τὰς τῶνδ' ἀβούλους συμφορὰς κατοικτιεῖν·
φέρ' ἀντίθες γάρ, τούσδε τ' εἰς γαῖαν παρεὶς
ἡμᾶς τ' ἐάσας ἐξάγειν, τί κερδανεῖς;
τὰ μὲν παρ' ἡμῶν τοιάδ' ἔστι σοι λαβεῖν·
Ἄργους *τοσήνδε χεῖρα τήν τ'* Εὐρυσθέως
ἰσχὺν ἅπασαν τῇδε προσθέσθαι πόλει.
ἢν δ' εἰς λόγους τε καὶ τὰ τῶνδ' οἰκτίσματα
βλέψας πεπανθῇς, εἰς πάλην καθίσταται
δορὸς τὸ πρᾶγμα· μὴ γὰρ ὡς μεθήσομεν
δόξης ἀγῶνα τόνδ' ἄτερ χαλυβδικοῦ.
τί δῆτα φήσεις, ποῖα πεδί' ἀφαιρεθεὶς
Τιρυνθίοις *θεὶς πόλεμον* Ἀργείοις *τ' ἔχειν,*
ποίοις δ' ἀμύνων συμμάχοις, τίνος δ' ὕπερ
θάψεις νεκροὺς πεσόντας; ἦ κακὸν λόγον
κτήσει πρὸς ἀστῶν, εἰ γέροντος οὕνεκα
τύμβου τὸ μηδὲν ὄντος, ὡς εἰπεῖν ἔπος,
παίδων τε τῶνδ' εἰς ἄντλον ἐμβήσει πόδα.
—EURIP. *Heraclid.*, 144-168.

Monday, 10*th April* 1893.—1 *to* 4 *o'clock.*

I. 1. Translate the following passages, with notes illustrative of Homeric Syntax :—

(*a*) *ἀλλ' ἄγε μοι τόδε εἰπὲ καὶ ἀτρεκέως κατάλεξον,*
ἢ καὶ Λαέρτῃ *αὐτὴν ὁδὸν ἄγγελος ἔλθω*
δυσμόρῳ, ὃς τείως μὲν Ὀδυσσῆος *μέγ' ἀχεύων*
ἔργα τ' ἐκοπτεύεσκε μετὰ δμώων τ' ἐνὶ οἴκῳ
πῖνε καὶ ἦσθ', ὅτε θυμὸς ἐνὶ στήθεσσιν ἀνώγοι.
(*b*) *οὐκ ἔσθ' οὗτος ἀνὴρ οὐδ' ἔσσεται οὐδὲ γένηται,*
ὅς κεν Τηλεμάχῳ *σῷ υἱέϊ χεῖρας ἐποίσει.*
(*c*) *νῦν μὲν μήτ' εἴης, βουγάϊε, μήτε γένοιο,*
εἰ δὴ τοῦτόν γε τρομέεις καὶ δείδιας αἰνῶς.
(*d*) *καὶ γὰρ* Τρῶάς *φασι μαχητὰς ἔμμεναι ἄνδρας,*
ἠμὲν ἀκοντιστὰς ἠδὲ ῥυτῆρας ὀϊστῶν
ἵππων τ' ὠκυπόδων ἐπιβήτορας, οἵ κε τάχιστα
ἔκριναν μέγα νεῖκος ὁμοιΐου πολέμοιο.
(*e*) *ὦ κύνες, οὔ μ' ἔτ' ἐφάσκεθ' ὑπότροπον οἴκαδ' ἱκέσθαι.*
(*f*) Ἀμφίνομος *δ'* Ὀδυσῆος *ἐείσατο κυδαλίμοιο*
ἀντίος ἀΐξας.
(*g*) *ἕζετ' ἔπειτ'* Ὀδυσῆος *ἐναντίη, ἐν πυρὸς αὐγῇ,*
τοίχου τοῦ ἑτέρου.
(*h*) *ἀνίη καὶ τὸ φυλάσσειν*
πάννυχον ἐγρήσσοντα.

2. Translate, and comment briefly on :—

(*a*) AT. *πότερα γὰρ τοξουλκὸς αἰχμὴ διὰ χερῶν αὐτοῖς πρέπει;*
XO. *οὐδαμῶς· ἔγχη σταδαῖα καὶ φεράσπιδες σάγαι.*

(*b*) βαλήν, ἀρχαῖος βαλήν, ἴθι, ἱκοῦ,
ἔλθ' ἐπ' ἄκρον κόρυμβον ὄχθου,
κροκόβαπτον ποδὸς εὔμαριν ἀείρων,
βασιλείου τιάρας φάλαρον πιφαύσκων.
(*c*) συγγενεῖ δέ τις εὐδοξίᾳ μέγα βρίθει·
ὃς δὲ διδάκτ' ἔχει, ψεφεννὸς ἀνὴρ ἄλλοτε ἄλλα πνέων
οὔ ποτ' ἀτρεκέι
κατέβα ποδί, μυριᾶν δ' ἀρετᾶν ἀτελεῖ νόῳ γεύεται.
(*d*) ἵσταμαι δὴ ποσσὶ κούφοις, ἀμπνέων τε πρίν τι φάμεν.
πολλὰ γὰρ πολλᾷ λέλεκται· νεαρὰ δ' ἐξευρόντα δόμεν βασάνῳ
ἐς ἔλεγχον ἅπας κίνδυνος· ὄψον δὲ λόγοι φθονεροῖσιν·
ἅπτεται δ' ἐσλῶν ἀεί, χειρόνεσσι δ' οὐκ ἐρίζει.

II. Translate, and comment briefly on :—

(*a*) οὐκουν αὖ ὡμολογήσαμεν ἐν τοῖς ἔμπροσθεν μήποτ' ἂν αὐτήν, ἁρμονίαν γε οὖσαν, ἐναντία ᾄδειν οἷς ἐπιτείνοιτο καὶ χαλῷτο καὶ πάλλοιτο καὶ ἄλλο ὁτιοῦν πάθος πάσχοι ἐκεῖνα, ἐξ ὧν τυγχάνει οὖσα, ἀλλ' ἕπεσθαι ἐκείνοις καὶ οὔποτ' ἂν ἡγεμονεύειν ;

(*b*) λέγεται τοίνυν, ἔφη, ὦ ἑταῖρε, πρῶτον μὲν εἶναι τοιαύτη ἡ γῆ αὕτη ἰδεῖν, εἴ τις ἄνωθεν θεῷτο, ὥσπερ αἱ δωδεκάσκυτοι σφαῖραι, ποικίλη, χρώμασι διειλημμένη, ὧν καὶ τὰ ἐνθάδε εἶναι χρώματα ὥσπερ δείγματα, οἷς δὴ οἱ γραφεῖς καταχρῶνται.

(*c*) ἀρκτέον μὲν οὖν ἀπὸ τῶν γνωρίμων, ταῦτα δὲ διττῶς· τὰ μὲν γὰρ ἡμῖν, τὰ δ' ἁπλῶς.

(*d*) ἢ οὐδ' ἄλλο οὐδὲν πλὴν τῆς ἰδέας (τῶν καθ' αὑτὰ ἀγαθῶν θείη τις ἄν) ; ὥστε μάταιον ἔσται τὸ εἶδος.

(*e*) ἔτι ἐκ τῶν αὐτῶν καὶ διὰ τῶν αὐτῶν καὶ γίνεται πᾶσα ἀρετὴ καὶ φθείρεται, ὁμοίως δὲ καὶ τέχνη.

(*f*) ἕτερον δ' ἔοικε καὶ τὸ δι' ἄγνοιαν πράττειν τοῦ ἀγνοοῦντα ποιεῖν.

When does Aristotle consider an act to be ἑκούσιον and when ἀκούσιον ?

(*g*) διὸ κατὰ μὲν τὴν οὐσίαν καὶ τὸν λόγον τὸν τί ἦν εἶναι λέγοντα μεσότης ἐστὶν ἡ ἀρετή, κατὰ δὲ τὸ ἄριστον καὶ τὸ εὖ ἀκρότης.

(*h*) γένεσίς τε πῶς ἂν εἴη ; δοκεῖ γὰρ οὐκ ἐκ τοῦ τυχόντος τὸ τυχὸν γίνεσθαι, ἀλλ' ἐξ οὗ γίνεται, εἰς τοῦτο διαλύεσθαι· καὶ οὗ γένεσις ἡ ἡδονή, τούτου ἡ λύπη φθορά.

State the argument.

(*i*) οἰκειότεραι δὲ ταῖς ἐνεργείαις αἱ ἐν αὐταῖς ἡδοναὶ τῶν ὀρέξεων· αἱ μὲν γὰρ διωρισμέναι εἰσὶ καὶ τοῖς χρόνοις καὶ τῇ φύσει, αἱ δὲ σύνεγγυς ταῖς ἐνεργείαις, καὶ ἀδιόριστοι οὕτως ὥστ' ἔχειν ἀμφισβήτησιν εἰ ταὐτόν ἐστιν ἡ ἐνέργεια τῇ ἡδονῇ. οὐ μὴν ἔοικέ γε ἡ ἡδονὴ διάνοια εἶναι οὐδ' αἴσθησις· ἄτοπον γάρ· ἀλλὰ διὰ τὸ μὴ χωρίζεσθαι φαίνεταί τισι ταὐτόν. ὥσπερ οὖν αἱ ἐνέργειαι ἕτεραι, καὶ αἱ ἡδοναί.

State the argument.

III. Analyse the following forms, adding, where you can, cognate words in other languages :—ἔρχατο, εἴρυσα, εἶος, ἐμεῦς, φατί, ἐντί, ὑπαί, οὔατα, σπλήν, ἔχεα, ὑγιής, θιγγάνω, ἑκυρός, ἔλπις, *Diespiter*, *traxe*,

maioribus, facilumed, sovos, cavi, arbiter, calumnia, fenus, delubrum, lingua, civis.

Give the derivation and etymological affinities of:—wig, quinsy, thumb, thaw, thirst, feather, choose, doom.

IV. Answer any *two* of the following :—

(*a*) What arguments may be advanced in favour of the European or Asiatic origin of the Homeric poems?

(*b*) Give an account of Pindar's dialect: *or*, sketch the history of Greek music, so far as known to us, shewing its connection with the development of lyric poetry.

(*c*) Shew how Plato brings the question of the immortality of the soul into connection with his Theory of Ideas. Mention any considerations that seem helpful towards fixing the time at which the *Phaedo* was written.

(*d*) How is Psychology connected with Ethics in the Aristotelian system?

V. Answer any *two* of the following :—

(*a*) Give an exact account of events in connection with the expedition of Xerxes, as we know them from the historians. Supplement this by references to, and if possible quotations from, the *Persae* of Aeschylus.

(*b*) Sketch (1) the history and functions of the Council of Five Hundred at Athens;
(2) the growth of the Ecclesia;
(3) the steps by which the payment for public services was introduced at Athens;
noting especially any new facts derived from the 'Αθηναίων Πολιτεία.

(*c*) The economic conditions of Athens; their effect on Athenian life and Athenian policy.

B.—DEPARTMENT OF PHILOSOPHY.

LOGIC, PSYCHOLOGY, AND METAPHYSICS.

FIRST PAPER.

Friday, 7th April 1893.—9 *to* 12 *o'clock.*

1. "Disjunctive judgment is the union of hypotheticals on a categoric basis." Show how this definition applies to the principle of Excluded Middle. What objections have been taken to the truth of this principle and to its value in logic?

2. With a little ingenuity we may convert hypothetical, disjunctive, and inductive arguments into categorical syllogisms. Give examples, and point out what difference of import is made by the conversion. Formal logic seeks to tabulate all arguments that are legitimate; does this require it to regard only a quantitative relation in judgments?

3. How is the validity of hypotheses measured? How may the degree of validity be increased? Competition between hypotheses is due to the want of crucial instances; explain the progress of the competition. Show, as an application of all you have said, how you would estimate the explanations that have been given of unconscious mental modifications.

4. It has been said that, while we may have confidence in our particular judgments about matters of fact, we cannot be certain about universal judgments, because they anticipate the future. Say (1) what truth there is in this; (2) whether a different logical principle is implied in making particular and in making general judgments.

5. What is the logical value of universal beliefs? Consider in your answer whether their validity is modified according to the origins that are assigned to them in doctrines of intuition, association, and psychological evolution.

SECOND PAPER.

Friday, 7th April 1893.—1 *to* 4 *o'clock.*

1. Investigate the Laws of Association with a view to discover how far they are reducible to a single principle.

2. Give a psychological account of our perception of Time. Discuss the metaphysical reality of Time.

3. Compare Locke's positions in Book IV. as to (*a*) the certainty, (*b*) the universality, of our knowledge with the psychological doctrines of Book II.

4. "Wherein consists the difference betwixt incredulity and belief?" How does Hume reply to this question? Explain the bearing of the answer on his general philosophical position.

5. Give an account of Aristotle's criticism of Plato. How far do you regard it as an advance upon Plato, or as a misrepresentation of Plato's meaning?

THIRD PAPER.

Saturday, 8th April 1893.—9 *to* 12 *o'clock.*

1. "I believe it to be a real error in philosophical method to make the initial steps in a theory of knowledge from the Cartesian position." Discuss this statement.

2. "Mens humana adaequatam habet cognitionem aeternae et infinitae essentiae Dei." What does Spinoza precisely mean by this statement, and how does he reach it? How does it harmonise with the rest of his system?

3. Trace the roots of Berkeley's thinking in (*a*) Nominalism, (*b*) Empiricism. Consider the influence of these positions upon his philosophy, and the extent to which he emancipated himself from them.

4. State Kant's argument in the "Refutation of Idealism," and explain its philosophical bearing.

5. What elements in the Kantian philosophy were emphasized and developed by Hegel? In what other directions has Kant been developed.

MORAL PHILOSOPHY.

FIRST PAPER.

Saturday, 8*th April* 1893.—1 *to* 4 *o'clock.*

Write an Essay upon :—The Definition of Justice.

SECOND PAPER.

Monday, 10*th April* 1893.—9 *to* 12 *o'clock.*

1. What are the postulates of ethics, and how are they justified as postulates?

2. Compare the method of utilitarianism with that of the ethic of evolution.

3. What different interpretations have been given to the fact of the common conviction of freedom in willing? Examine them.

4. Is pleasure (1) ever, (2) always the object of desire? Explain the origin of new desires.

5. Investigate the difficulty of measuring what praise and blame are assignable to the moral and immoral actions of different people.

6. Examine the following statement :—"The true beginning of Metaphysic lies in Ethics. . . . I feel certain of being on the right track when I seek in that which *should* be the ground of that which *is.*"—LOTZE.

THIRD PAPER.

Monday, 10*th April* 1893.—1 *to* 4 *o'clock.*

1. On what principle does the *Republic* divide the functions of a State among its members? What courses of education are assigned to each class?

2. How does Aristotle define these elements of volition :—*φαντασία, ἐπιθυμία, βούλησις, βούλευσις, προαίρεσις*? Indicate the importance of the following in an explanation of his doctrine of will :—(1) *ὀρεγόμεθα διότι δοκεῖ μᾶλλον ἢ δοκεῖ διότι ὀρεγόμεθα.* (2) *ἡ θεωρία τὸ ἥδιστον καὶ ἄριστον.*

3. How does Spinoza distinguish active and passive states of mind? Illustrate his treatment of emotions. Give some account of the "homo liber."

4. Explain the meaning and the use in Kant and in Hegel of the ethical notion of freedom.

5. Examine the methods by which Green, Sidgwick, and Spencer would resolve "perplexities of conscience."

C.—DEPARTMENT OF MATHEMATICS.

MATHEMATICS.

Friday, 7th April 1893.—9 *to* 12 *o'clock.*

1. On the sides BC, CA, AB of a triangle ABC, points D, E, F are taken so that $(BD:DC) = (CE:EA) = (AF:FB)$. Show, geometrically, that the vertices of the median triangle of the triangle DEF lie on the sides of the median triangle of the triangle ABC.

2. I, I_1, I_2, I_3 are the centres of the inscribed and escribed circles of a triangle ABC; D, E, F, D_1, E_1, F_1 are the points of contact with the sides of the inscribed and one of the escribed circles (centres I and I_1). Show (1) that I_1D, I_2E, I_3F are concurrent, and that ID_1, I_3E_1, I_2F_1 are concurrent, and (2) that the area of the triangle ABC is the geometric mean of the areas DEF and $I_1I_2I_3$, and also of $D_1E_1F_1$ and II_2I_3.

3. Construct the focus and directrix of a parabola, given three points on the curve and a tangent.

4. Find the limit when n is infinite of (1) $\left(1+\dfrac{1}{n}\right)^n$; (2) $\left(1+\dfrac{1}{n}\right)^{n^2}$.

Sum to infinity the series whose nth terms are $(a+bn+cn^2)/n\,!$ and $(a+bn+cn^2)x^n/n\,!$

5. Prove that the equation

$$x^4+4ex^3+6e^2x^2+4ex+1=0$$

has no real roots, if $\pm e$ lie without the limits $1/3$ and 1, and has two real and two imaginary roots if $\pm e$ lie within these limits.

Eliminate x, y, z from the equations

$$\begin{aligned} cy^2-2a'yz+bz^2&=0\\ az^2-2b'xz+cx^2&=0\\ bx^2-2c'xy+ay^2&=0. \end{aligned}$$

6. Find a general expression for the equation of the polar of a given point with regard to a given conic.

Show that the condition that the circle represented by the trilinear equation

$$ayz+bzx+cxy=(ax+by+cz)(lx+my+nz)$$

should cut orthogonally the circle circumscribing the triangle of reference is $l\cos A+m\cos B+n\cos C=1$.

7. Find the surface generated by a straight line which meets three fixed non-intersecting straight lines.

A quadric is described to pass through two non-intersecting given lines, and to touch a given plane. Show that the locus of the point of contact with the plane is a straight line.

8. Prove that the radical planes of three spheres intersect in a straight line.

Given an acute-angled triangle ABC, show that there are only two points from which three mutually perpendicular straight lines can be drawn so that each shall pass through a vertex.

Find the distance of the points from the plane of ABC.

9. Find the rectilineal asymptotes of

$$y^2(x-a)=x^3+a^3,$$

and find how the curve is situated with reference to them.

Find the equation of a cubic curve which lies entirely on the positive side of the axis of y, and consists of two branches, each of which has the axis of y and the line $x-y=0$ as asymptotes.

10. Prove the following expressions for the radius of curvature of a plane curve

$$(1)\ \rho=r\frac{dr}{dp} \qquad (2)\ \rho=r\frac{d\theta}{ds}\Big/\left[r\left(\frac{d\theta}{ds}\right)^2-\frac{d^2r}{ds^2}\right]$$

If r be the radius vector of any point of a curve and γ the semi-chord of curvature at the point through the origin, show that the radius of curvature at the corresponding point of the pedal with regard to the origin is given by $1/\rho=2/r-\gamma/r^2$. Apply this to find the chord of curvature at any point of a parabola or ellipse passing through the focus.

11. Evaluate the following integrals :—

$$(1)\ \int\frac{d\theta}{a+b\tan\theta} \qquad (2)\ \int\frac{dx}{(1+x^2)^2}$$

$$(3)\ \int\frac{dx}{(1+2x)\sqrt{1+x}} \qquad (4)\ \int\frac{dx}{\sqrt{\tan x}}$$

12. Find the area of the evolute of an ellipse.

Evaluate the integrals :—

$$(1)\ \int_0^\infty\frac{\sin ax}{x}dx \qquad (2)\ \int_0^\infty\frac{\sin ax\cos bx}{x}dx$$

Friday, 7*th April* 1893.—1 *to* 4 *o'clock.*

1. Assuming Taylor's theorem in the Lagrangian Form for a function of a single variable, establish it for a function of two variables.

If $\phi(x, y, z)$ be a homogeneous function of x, y, z of n^{th} degree, shew that

$$\left(x\frac{d}{dx}+y\frac{d}{dy}+z\frac{d}{dz}\right)^r\phi(x,y,z)=n(n-1)\ldots\ldots(n-r+1)\phi(x,y,z).$$

Discuss the turning values of Σx^2y under the condition

$$x^2+y^2+z^2=a^2.$$

2. Explain the use of the Body and Space Centrodes in representing the motion of a plane figure in its own plane; and shew how to find these curves when the motion of the figure is determined by the sliding of two pins in given slots.

Two discs revolve in a plane about fixed centres and roll in contact with each other; find the equations to their contours when on turning the first with uniform angular velocity the angular velocity of the second is a simple harmonic function of the time.

3. If $B(r, s, x)=\int dx\ x^r(1-x)^s$, shew that $B(r, s, x)$ may, with certain exceptions, be made to depend on any one of the four $B(r-1, s, x)$, $B(r, s-1, x)$, $B(r+1, s, x)$, $B(r, s+1, x)$; and point out the bearing of this on the question whether $B(r, s, x)$ is an algebraic function of x.

Discuss from this point of view the reduction of $\int dx/(1-x^4)^{\frac{1}{2}}$.

4. Find the conditions for the validity of the formula

$$D\int_a^b dx f(x, t)=\int_a^b dx\ Df(x, t),$$

where D denotes differentiation with respect to the parameter t of which a and b are independent, and consider specially the case where the limits are not finite.

Apply your criteria to the integral $\int_0^\infty dx e^{-a^2x^2}\cos 2rx$; and evaluate it by differentiation.

5. State the restrictions on $f(y)$ and on z necessary for the validity of the theorem

$$\underset{\alpha=\infty}{L}\int_a^b dy f(y)\frac{\sin\alpha(y-z)}{\sin(y-z)}=\frac{\pi}{2}\{f(z+0)+f(z-0)\};$$

and apply it to shew that

$$\int_{\pi}^{\pi} dz f(z)\{\tfrac{1}{2}+\sum_1^\infty \cos n(z-x)\}=\frac{\pi}{2}\{f(x+0)+f(x-0\}\text{ where}$$

$$-\pi<x<+\pi.$$

Expand $\sinh x$ in a Fourier-cosine-series: and draw the graph of the series.

6. Establish the general formula for transforming a double integral; and by means of it, or otherwise, prove that

$$\mathrm{B}(m, n)=\Gamma(m)\ \Gamma(n)/\Gamma(m+n).$$

7. State the fundamental properties of ordinary linear differential

equations with constant coefficients upon which the methods for solving them are based: and deduce the general solution of the equation

$$(D-\alpha)^3\{(D-\beta)^2+\gamma^2\}^2y=0.$$

Solve the following equations, and discuss the singular solution of the last—

$$(\alpha)\ \frac{d^4y}{dx^4}-2\frac{d^3y}{dx^3}+5\frac{d^2y}{dx^2}-8\frac{dy}{dx}+4y=x^2e^x;$$

$$(\beta)\ (x^2+y^2-a^2)xdx+(x^2-y^2-b^2)ydy=0;$$

$$(\gamma)\ (x^2+y^2)(1+p)^2-2(x+y)(1+p)(x+yp)+(x+yp)^2=0.$$

8. Give the geometrical theory of the solution of the linear partial differential equation $Pp+Qq=R$.

Solve the equations

$$(\alpha)\ (y-z)p/yz+(z-x)q/zx=(x-y)/xy;$$

$$(\beta)\ (x+y)(p+q)^2+(x-y)(p-q)^2=1.$$

9. Determine y for all positive values of t and for all values of x from $x=0$ to $x=l$, by means of the differential equation $d^2y/dt^2=a^2d^2y/dx^2$, together with the initial conditions, when $t=0$, $y=\lambda x$, $0 \ngtr x \ngtr \frac{1}{2}l$; $y=\lambda(l-x)$, $\frac{1}{2}l \ngtr x \ngtr l$; $dy/dt=0$, $0 \ngtr x \ngtr l$: and $y=0$ when $x=0$ and when $x=l$ for all values of t.

10. Shew that any Invariant of a Binary Quantic is homogeneous and isobaric in the coefficients of the Quantic.

Given the source of any Covariant, find the characteristic equations for calculating the other coefficients.

Find for the Quantic an Invariant of the third order and a Covariant of the third order and fourth degree: shew that the latter is the Jacobian of the Quantic and its Hessian.

11. If Δ be the discriminant of the function $ax^2+2hxy+by^2+2gx+2fy+c=0$, shew that $\Delta/\sin^2\omega$ is an absolute invariant for any transformation from one set of Cartesian axes to another.

If α, β be the lengths of a pair of tangents to the conic $ax^2+2hxy+by^2+2gx+2fy+c=0$, which meet at right angles, shew that the equation to the conic when referred to these tangents as axes becomes $(x/\alpha+y/\beta-1)^2+2mxy/\alpha\beta=0$; and deduce a relation connecting α and β.

A given conic touches a pair of rectangular tangents which are given in position; find the class of the envelope of the chords of contact.

12. Prove that two of a family of confocal quadrics touch a given straight line: and that the tangent planes at the points of contact are perpendicular.

A series of confocal quadrics touch a series of parallel straight lines; find the locus of the points of contact.

NATURAL PHILOSOPHY.

Saturday, 8th April 1893.—9 *to* 12 *o'clock.*

1. Find the nature of the small motion (in one plane) of a simple pendulum, when the point of suspension has a simple harmonic motion horizontally.

Employ your result to trace the process by which, under a certain condition, the motion ceases to be small.

2. Assuming that, when an elastic sphere falls upon a hard horizontal plane, the force called into play is as the power $\frac{3}{2}$ of the distortion (measured by the shortening of the vertical diameter); and that the coefficient of restitution is constant; compare the durations of the successive impacts, as well as the time-averages of the force during each.

3. Find the form of the catenary when a uniform chain rests, in part, upon a smooth inclined plane which is perpendicular to the vertical plane passing through the points of suspension.

4. Find the greatest rate of fall of temperature with elevation which is consistent with the stability of a still atmosphere.

5. State the fundamental principles of the method of Electric Images, and point out how they can be applied to find the distribution of the charge on each of two spherical conductors influencing one another.

6. If V be any function of position, give an interpretation of $-\nabla^2 V = \frac{d^2V}{dx^2}+\frac{d^2V}{dy^2}+\frac{d^2V}{dz^2}$. Thus show that when V is constant throughout any finite three-dimensional space (however small) it is constant throughout all space which can be reached from this by paths which do not pass through regions in which $\nabla^2 V$ differs from zero.

7. One point of a rigid plane plate is suddenly made to move in a given direction, and with given speed, in the plane of the plate. Find the consequent impulsive motion of any other point, and the nature of the subsequent motion of the plate.

8. Form the general equations of motion of a frictionless fluid, and point out exactly the nature of the simplifications which are introduced by supposing either (1) the fluid to be incompressible, (2) the motion to be differentially irrotational, or (3) the motion to be "steady."

9. State the principle of Varying Action for the motion of a particle. Apply it to find the surfaces of equal action for independent particles simultaneously projected under given conditions.

Work out the special case in which the particles are projected in all directions from a given point, with equal speed, and are subject to gravity only.

10. Assuming the equations

$$A\dot{\omega}_1+(C-B)\omega_2\omega_3=L, \text{ etc.}$$

integrate them for the special case in which there are two equal moments of inertia, and a constant couple acting round the third axis of inertia. Point out the interpretation of the final equations.

11. Show how to find the value of the specific heat of a substance, under any assigned condition, the specific heat at constant volume being known. Illustrate your process by applying it to find the specific heat of a "perfect" gas at constant pressure; and thence the form of its adiabatics.

12. Form the equations for the steady flow of electricity in a conducting plate, when the conducting power is the same in all directions at any point, but varies continuously from point to point.

Show how to form the boundary conditions when the parts of the plate on opposite sides of a line are of finitely different, but uniform conductivities.

Saturday, 8th April 1893.—1 *to* 4 *o'clock.*

1. A plane lamina is moving in its plane, show that at any instant there is an instantaneous centre of rotation.

Prove that the envelope of the instantaneous paths of all points in the lamina, lying on the circumference of a circle, is a conic section of which the instantaneous centre is a focus.

2. Forces are represented by the straight lines joining a given point to the n vertices of a closed polygon, not necessarily plane. Prove that their resultant is the same as that of forces represented by the lines joining the given point to the middle points of the sides of the polygon.

Hence show that the resultant is n times the line joining the given point to the centroid of the polygon.

3. Two uniform unequal ladders, connected at their upper extremities by a smooth hinge, rest on a rough horizontal plane. Determine how the equilibrium will be broken when the angle between the ladders is sufficiently increased, and find the limiting position of equilibrium.

4. In a sphere the density varies inversely as the distance from a point in the circumference; prove that the distance of the centre of inertia from that point is two-fifths of the diameter.

5. Prove that in a plane field of force, due to the attraction of a straight rod of uniform density, the surfaces of equilibrium are elipses of which the extremities of the rod are the foci.

Prove also that the force at any point is inversely proportional to the normal of the ellipse of equilibrium passing through that point.

6. Find the law of force in a circular orbit when the force is directed to any given point in the plane of the orbit.

Discuss the possibility of the motion in the orbit when the centre of force is external to the orbit.

7. A heavy uniform string is suspended from two points in the same

horizontal line, and to any point P of the string a heavy particle is attached ; show that the two portions of the string are parts of equal catenaries.

8. Find the component velocities of any point $P(x, y, z)$ of a rigid body in terms of a, b, c, the component velocities of the centre of inertia, and ω_1, ω_2, ω_3 the angular velocities of rotation of the body about three rectangular axes through the centre of inertia.

Show that all points whose directions of motion at any instant pass through the resultant axis of rotation at the centre of inertia lie on a circular cylinder of which that axis and the instantaneous axis are diametrically opposite generators.

9. Show that the whole kinetic energy of a rigid system is equal to the energy of translation of the whole mass collected at the centre of inertia, together with the energy of rotation of the system about the centre of inertia regarded as a fixed point.

Show that a similar proposition is true if the motion of the system be referred to any point on the circular cylinder defined in the previous question.

10. A sphere rolls down a roof of given length and steepness, and whose edge is at a given vertical height fron the ground. Find the horizontal distance from the edge of the roof at which the sphere will strike the ground.

11. A flexible rod rests on three supports in the same horizontal line, one at each end of the rod and one at its centre. Compare the pressures on the supports.

12. A cylindrical solid of any form of cross section floats in a liquid with its axis of symmetry through the centres of inertia of its sections vertical. Show that its stability is increased if a hole be pierced in the cylinder of similar cross section and having the same axis of symmetry.

SCHOOLMASTER'S DIPLOMA.

The papers in Education for the Degree of M.A. and the following

ADDITIONAL PAPER.

1. Justify the high place claimed for Language as an instrument of Education. Explain its use for instruction, training, and discipline respectively.

2. Summarise the argument for continuing to teach Latin in modern times, and show, by not fewer than four examples, that the reasons for teaching the Language guide to sound principles of method.

3. What were the leading doctrines of the "New Education," and how were they arrived at? How does a Kindergarten differ from an infant school? What is meant by the *Occupations* and *Gifts* of Froeble's system? How do they stand related to his educational ideas?

4. Explain the chief services which Pestalozzi rendered to Education. Describe his mode of dealing with *Number*, and his ideas on

the cultivation of the "Artistic Faculty." How was he influenced by Rousseau!

5. Give the chief points in Quintilian's argument in favour of *Public* as against Private Education. What objections does he represent as taken to the primer, and how does he meet them?

6. How is the study of *several subjects simultaneously* defended in the *Institutes* of Quintilian? On what grounds does Quintilian advocate the introduction of Music and Geometry into the Education of an Orator?

7. What is Authority in the teacher? Show its relation to Moral Instruction and Moral Discipline.

THESIS.

Encyclopaedism in Education,

or

The psychological and practical relations of intellectual and moral *Discipline.*

Bursaries, Prizes, Scholarships, and Fellowships in Arts.

I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	16—	George Heriot.	At present £480 0 0	16	3	£30 0 0	Governors of George Heriot's Trust.
		Do. Bursaries for Girls.	390 0 0	13	3	30 0 0	Do.
		Do. High School University Bursaries.	270 0 0	9	3	30 0 0	Do.
II.	16—	Do. For Young Men leaving Heriot's Hospital School.	Regulated by No. of Candidates.	4	4	30 0 0	Do.
III.	1619	Archibald Johnston, Merchant in Edin.	11 2 2	1	4	11 2 2	Earl of Haddington.
IV.	1622	John Trotter of Mortonhall.	4 10 1	1	4	4 10 1	Trotter of Mortonhall.
V.	1626 1629 1640	Hugh Wight and David M‘Call.	4 14 5	1	4	4 14 5	Town Council and Louis of Plean, two choices alternately.
VI.	1639	Dr Robt. Johnstone of London.	25 0 0	2	4	12 10 0	Johnstone of Annandale.
VII.	1639	Do. do.	25 0 0	2	4	12 10 0	Town Council.
VIII.	1642 1653	Mausie Weir, relict of R. Dobie, Mer., & Dean of Guild of Edin., and D. Jenkins, Mer., Edin.	5 11 1	1	4	5 11 1	Town Council.
IX.	1644	Jas. Dalgliesh, Merchant, Edin.	11 2 2	1	4	11 2 2	Do.
X.	1673	Jn. M‘Morran, Merchant.	2 15 6	1	4	2 15 6	Do.
XI.	1678	John Penman, Bailie and Merchant, Edinburgh.	14 15 0	1	4	14 15 0	Society for the Benefit of the Sons of the Clergy.
XII.	1678	Hector Ford of Branxton.	33 6 6	3	4	11 2 2	Town Council.
XIII.	1687	Sir Andrew Ramsay of Abbotshall.	11 2 2	1	4	11 2 2	Do. and Ministers of Edinburgh.
XIV.	1696	Hepburn and Lightbody.	5 16 8	1	4	5 16 8	Town Council and Campbell of Aberuchill, alternately
XV.	1698	Ad. Chrystie, Under Clerk of Session.	18 0 0	1	4	18 0 0	Faculty of Advocates
XVI.	1702	Thos. Bryson, Bailie and Merchant in Dunbar.	10 0 0	2	4	5 0 0	Ministers of the Presbytery of Dunbar.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
XVII.	1703	James Pringle of Torwoodlee.	£6 7 9	1	4	£6 7 9	Pringle of Torwoodlee.
XVIII.	1714	Rev. Robert Brown, of Protestant Consistory at Zamose.	25 0 0	2	4	15 0 0 10 0 0	Town Council.
XIX.	1723	Alexander Mitchell, W.S.	8 6 8	1	4	8 6 8	Livingston Learmonth of Parkhall.
XX.	1725	William Wardrope, Litster, Edinburgh.	5 11 1	1	4	5 11 1	J C. Wardrop, W.S., 82 Princes St., Edin.
XXI.	1726	David Christie, Wigmaker, Edinburgh.	8 6 8	1	4	8 6 8	Town Council.
XXII.	1734	Laurence Dundas, Professor of Humanity in the University of Edin.	About 44 0 0	2	4	About 22 0 0	Jas. Dundas of Dundas, Robt. Dundas of Arniston, and Dundas of Carronhall, by turns.
XXIII.	1764 1766	Rev. J. Penman, Min. of Bothkenner.	5 8 0	1	4	5 8 0	Gilmour of Craigmillar.
XXIV.	1768	Thos. Fraser, Clerk in the office of City Clerk, Edinburgh.	36 0 0	2	7	18 0 0	The Provost, Dean of Guild, and Treasurer of Edin.
XXV.	1778	Jas. Shortt, Optician, Edinburgh.	9 0 0	1	4	9 0 0	Earl of Morton.
XXVI.	1784	William Hume, Eastbarns, Dunbar.	16 0 0	2	4	8 0 0	Ministers of the Presbytery of Dunbar.
XXVII.	1784	Rev. Jas. Millar and Spouse.	24 0 0	1	4	24 0 0	Kirk-Session of Kippen.
XXVIII.	1809	Dr Donald Grant, London.	180 0 0	2	4	90 0 0	Earl of Seafield, and James Mackenzie, W.S., as Dr Grant's Trus.; whom failing, Sen. Acad.
XXIX.	1810	Rev. James Stewart.	30 0 0	3	3	10 0 0	Senatus Academicus.
XXX.	1821	Sir J. M'Pherson.	About 85 17 4	2	2	About 42 18 8	Senatus Academicus.
XXXI.	1837	James Menzies	200 0 0	4	4	About 45 0 0	Sir R. Menzies, Bart., & Ministers of Dull, Weem, & Fortingall.
XXXII.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk.	10 0 0	1	3	10 0 0	Principal, and Profs. of Latin, Greek, Mathematics, Logic & Metaphysics, and Moral Philosophy.
XXXIII.	1846	John Jamieson, Esq., Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal, & two Profs. of the University.
XXXIV.	1846	G. P. Bidder, C.E.	43 12 0	1	4	43 12 0	Senatus Academicus.
XXXV.	1852	Wm. Lennie, Esq.	48 0 0	4	4	12 0 0	Town Council.
XXXVI.	1853	John Bruce, Esq. Trinity Crescent, Edinburgh.	160 0 0	1 4	4 4	40 0 0 30 0 0	Do.
XXXVII.	1858	M'Diarmid Trustees.	10 0 0	1	3	10 0 0	Senatus Academicus.
XXXVIII	1860	Wm. Patrick, Esq., of Roughwood.	About 120 0 0	1 1	2 2	About £80 " £40	Principal and Professors in Arts.
XXXIX.	1858	Edin. Ayrshire Club.	50 0 0	2	2	£25 0 0	Edin. Ayrshire Club.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
XL.	1863	Peeblesshire Society.	£45 0 0	3	4	£10 0 0 20 0 0	Peeblesshire Society.
XLI.	1864	Ed. Caithness Asso.	10 0 0	1	4	10 0 0	Ed. Caithness Asso.
XLII.	1864	A. H. Rhind of Sibster.	Interest of 500 0 0	1	4	About 20 0 0	Edin. Caithness Asso.
XLIII.	1865	Mrs Margt. Tyndall Bruce, of Falkland.	165 0 0	3 3	3 3	35 0 0 20 0 0	Senatus.
XLIV.	1865	Horsliehill Scott.	76 17 6	2	2	38 8 9	Do.
XLV.	1867	Miss Hannah Harrison, of Lasswade.	34 13 8	1	2	34 13 8	Do.
XLVI.	1867	Rev. John Spence.	About 200 0 0	5 1	2 1	1st Year 30 0 0 2nd Year 40 0 0 50 0 0	Governors of the Spence Bursary Trust.
XLVII.	1869 1872	Edin. Border Counties Association.	50 0 0	1 1	4 4	30 0 0 20 0 0	Edinburgh Border Counties Assoc.
XLVIII.	1869	Argyllshire, Bute, and Western Isles Asso.	12 0 0	1	4	About 12 0 0	Argyllshire Association.
XLIX.	1870	Stewart of Ardvorlich.	16 0 0	1	4	16 0 0	Proprietor of the Estate of Ardvorlich.
L.	1870	David Cowan.	About 35 0 0	1 1	2 1	About 30 0 0 20 0 0	Directors of Ayr Academy.
LI.	1871	J. Robertson Sibbald.	About 150 0 0	5	3	30 0 0	Tr. of Dr J.R. Sibbald.
LII.	1872	Angus Club.	25 0 0	1	4	25 0 0	Angus Club.
LIII.	1873	Earl of Zetland.	About 40 0 0	1	3	About 40 0 0	Trustees of Earl of Zetland.
LIV.	1873	The Grierson Trus.	104 0 0	4 1	4 4	20 0 0 26 0 0	Senatus Acad.
LV.	1874	Upper Ward of Lanarkshire.	20 0 0	2	4	20 0 0	Upper Ward Assoc.
LVI.	1874	Johnstone of Harthope.	18 15 0	1	4	18 15 0	Senatus Acad.
LVII.	1874	James Lambert.	About 40 0 0	1	4	About 40 0 0	Senatus Acad.
LVIII.	1875	Robert Marshall.	37 10 0	1	4	37 10 0	Senatus Acad.
LIX.	1876	J. Fothringham of Heathpool.	44 6 0	2	4	22 3 0	Senatus Acad.
LX.	1877	Earl of Zetland.	About 40 0 0	1	3	40 0 0	Trustees.
LXI.	1878	Edin. E. Lothian Asso.	20 0 0	1	3	20 0 0	Association.
LXII.	1878	Edin. University Endowment Asso.	120 0 0	6	3	20 0 0	Senatus Academicus.
LXIII.	1878	Jas. Gillan, Forres.	63 0 0	3		21 0 0	Mr Gillan's Trustees.
LXIV.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
LXV.	1880	Rev. John Patterson	About 20 0 0	1	4	About 20 0 0	Senatus Academicus.
LXVI.	1880	High. and Agri. Soc.	200 0 0	10	1	20 0 0	Highland Society.
LXVII.	1881	Thomas Carlyle.	About £160	8	4	20 0 0	Senatus Acad.
LXVIII.	1883	Subscribers to Mackinnon Testimonial	£56 5 0	3	3	18 15 0	Senatus Acad.
LXIX.	1882	James Whitelaw.	66 18 10	3	3	22 6 4	Senatus Acad.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
LXX.	1883	William Renton, Edinburgh.	£19 9 6	1	1	£19 9 6	Profs. Chrystal, Tait, Crum Brown, and Nicholson.
LXXI.	1883	Isabella Macdougall	About 120 4 3	4	3	About 30 0 0	Trustees.
LXXII.	1886	Rob. P. Newton of Castlandhill.	87 6 8	4	2	21 16 8	Senatus Academicus.
LXXIII.	1886	Pet. C. Mann of Nairn and Durham.	80 0 0	3	3	26 13 4	Senatus Academicus.
LXXIV.	1886	Richd. Allan, Feuar, Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
LXXV.	1887	Mrs Kidd of Aigbarth, near Liverpool.	33 9 4	1	4	33 9 4	Senatus Academicus.
LXXVI.	1887	Charles Jardine of Thorlieshope.	About 152 8 4	4	4	About 38 2 2	Senatus Academicus.
LXXVII.	1888	Mrs Harriet E. Morrison.	About 24 0 0	1	4	About 24 0 0	Senatus Academicus.
LXXVIII.	1889	Daniel Maclaurin, London.	About 70 0 0	1	4	About 70 0 0	Town Council.
LXXIX.	1889	James Simson, Edinburgh.	About 150 0 0	6	3	25 0 0	Presbytery of Edinburgh.
LXXX.	1890	George Cousin.	28 0 0	1	3	28 0 0	Senatus Academicus.
LXXXI.	1890	Rev. Thomas Maule.	80 0 0	4	6	20 0 0	Principal, and Profs. of Humanity and Greek.
LXXXII.	1891	Donald Fraser, M.D., London, and Association for the Better Endowment of the University.	50 0 0	1	1	50 0 0	Senatus Academicus.

CONDITIONS OF FOUNDATIONS AND NAMES OF BURSARS.

I. These *Heriot Bursaries* are for Students unconnected with the Hospital, entering upon a regular Curriculum in Arts or Science with a view to graduation. (For remodelled scheme, see CALENDAR, 1887-88, p. 498.) *Bursars*—1890, Andrew Tweedie, Allan G. Gilbert, Thomas Smith, James A. Craig, John Gifford, E. H. Franks, Jas. B. M'Owan. 1891, Robert C. M. Bell, Thomas Hart, Charles S. Pennell, Donald B. Waters, James Ferrier. 1892, Alexander M'Gregor, David Nichol Smith, William D. Falconer, David William Inglis.

Do., for Girls. These Bursaries are for Girls Matriculating for the first time at the University, and cannot be held along with any other Bursary or Scholarship. *Bursars*—1892, Sarah W. Davison, Elizabeth W. Garrett, Ethelwyn L. Lemon, Mary S. M. Bell, Margaret L. Thomson.

Do., High School University Bursaries. These are awarded by competitive examination among Scholars attending the High School, Edinburgh, and may be held at any University approved by the Governors. *Bursars* — 1890, J. Keith Ross, James A. Gibson. 1891, Donald G. Ross, Thomas S. Muir. 1892, William David Ross, R. W. MacKenna, W. S. Simpson.

II. *Do.* Young men who, upon leaving Heriot's Hospital, are, after examination, declared hopeful scholars, and fit to follow any of the liberal professions, are entitled to a Bursary of £30 a-year for four years, with a view to attendance on the regular course in Arts, with a view to the degree of M.A.

III. *A. Johnston Bursary.*—Each Bursar is entitled to hold this Bursary for four years, subject to the conditions that he shall pass such examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and pass the Departmental Examinations for M.A. appropriate to each year. No one is permitted to hold the Bursary along with any other Bursary in the University. The Bursar must attend the Classes in the Arts Curriculum.

IV. *Trotter Bursary.* This Bursary is held under the same conditions as No. III.

V. *Wight and M'Call Bursary.* This Bursary is held under the same conditions as No. III.

VI. and VII. *R. Johnstone Bursaries.*—By Ordinance No. 82, the holder of each of the four Robert Johnstone Bursaries is entitled to hold his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the degree of M.A. No person is allowed to hold any of these Bursaries along with any other Bursary in the University. *Bursar*—1892, Charles T. Magregor.

VIII. *Weir and Jenkins Bursary.*—For a Student in Arts, who must follow the Curriculum for the Degree of M.A.

IX. The *Dalgliesh* Bursar is entitled to hold the Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts in the University, and regularly pass the Departmental Examinations required of Students proceeding to the Degree of M.A. No person is allowed to hold the Bursary along with any other Bursary in the University.

X. *M'Morran Bursary.*—This Bursary is for a "Student of Philosophy" in the Arts Curriculum.

XI. *Penman* Bursar.—The Bursar must attend the Classes in the Arts Curriculum.

XII. Each *Ford* Bursar is entitled to hold his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the Degree of M.A. No person is permitted to hold any of the Bursaries along with any other Bursary in the University.

XIII. The *Sir A. Ramsay* Bursar holds his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the degree of M.A. No person is permitted to hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University.

XIV. The *Hepburn and Lightbody Bursary* was founded by Sir Colin Campbell, Lord Aberuchill, and Sir Patrick Aikenhead, as executors of Sir Patrick Hepburn of Blackcastle. It is for a Student of Philosophy who follows the Curriculum in Arts.

XV. The *Chrystie Bursary* is usually held for four years. The Bursar is taken bound to attend "the usual classes," and must produce yearly to the Faculty certificates from the respective Professors of his due attendance, and the diligent prosecution of his studies. Candidates are referred for information to the Clerk to the Faculty of Advocates, Advocates' Library.

XVI. The *Bryson* Bursars are first to enter the Humanity class: afterwards they are to pass through the rest of the classes in Arts until their Laureation; at which time, if judged by the ministers of the Presbytery of Dunbar fit for the study of Theology, they may continue for two years in Theology.

XVII. The *Pringle Bursary* was founded by James Pringle of Torwoodlee for a Bursar in Philosophy and Divinity, who must attend the classes in the Curriculum in Arts for M.A.

XVIII. The *Brown Bursaries* are payable to Bursars in the regular course of study in Arts for M.A.

XIX. The *Mitchell Bursary* is payable to a student during a regular course of four years in the Faculty of Arts for M.A., and during two years (if the Patron think fit) at the Divinity Classes.

XX. The *Wardrope Bursary* is for the maintenance and support of a Bursar of Philosophy in the University.

XXI. This *Christie Bursary* may be held by a Student during a regular course of four years in the Faculty of Arts for M.A.

XXII. *Dundas Bursaries.*—The Patrons are directed to prefer the Mortifier's near relations; failing such, those of the surname of Dundas; and failing such, any other persons at their discretion. By Ordinance No. 78 of the Universities' Commissioners, each person presented to either of the Dundas Bursaries is entitled to hold the same for four years as a Student of Arts, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and shall regularly pass the Departmental Examinations required for M.A. These Bursaries cannot be held with any other Bursary in the University.

XXIII. The *Penman Bursary* is payable to a "Student of Philosophy" for the period of four years in the Curriculum of Arts.

XXIV. The *Fraser Bursaries* are for maintaining two Students of the name of Fraser, till they finish their course and take the Degree in the Faculty of Arts, and for three years thereafter; they making their election whether to follow Divinity, Law, or Medicine. Two Classes at least must be attended each Winter Session. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXV. The primary object of the *Shortt Mortification* is the establishment of a

Bursary for Mathematics. The Bursar must attend the Classes in the Curriculum in Arts.

XXVI. The conditions of the *Hume Mortification* correspond with those of Bryson's, No. XVI., and the presentations and payments are made as in that case.

XXVII. *Millar Bursary.*—To be held by a Student intended for the Ministry in the Church of Scotland, during his Curriculum in the Faculty of Arts.

XXVIII. The *Grant Mortification* is for Students of the University of Edinburgh, of the name of Grant. The holders may attend the Arts, Medical, Divinity, or Law Classes. Application for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1890, James Taylor Grant, Lewis Grant.

XXIX. *Stewart Bursaries.*—Candidates must be in the *second* year of attendance in the Curriculum of Arts. Bursars must attend Logic and the other Classes usually attended in that year, with a view to the Degree in Arts. *Bursars*—1892, Edward E. Braine, John D. Comrie.

XXX. The *Macpherson Bursaries* are for the benefit of Students who are natives of the Highlands. They are bestowed on Students at the commencement of the *third* year of the regular course in Arts, with a view to the Degree of M.A., and are tenable for two years, during which the Bursars must attend Classes in the Curriculum of Arts. Candidates must have a knowledge of Gaelic. *Bursars*—1891, Hugh Gunn. 1892, John M. Macdonald.

XXXI. *Menzies.*—These Bursaries, four in number, were founded in 1837, by James Menzies, Esq., Glasgow. They are of the annual value of £45 each, but vary in amount at discretion of the patrons, and tenable for four years, in any one of the Universities of St Andrews, Glasgow, or Edinburgh. Preference first to the relations of the Founder, next, to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Weem, and Fortingall; failing whom, any Student who shall be found best qualified may be appointed.

XXXII. The *Blair* Bursar must attend the Classes in the required order, and pass the Departmental Examinations necessary for the Degree of M.A. *Bursar*—1892, Steuart E. Pears.

XXXIII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Roberton, Culter and Biggar. The Bursar may attend Classes in any of the Faculties. *Bursar*—1889, Andrew Rae.

XXXIV. Called the "*Jardine Bursary*," being founded by Mr Bidder, C.E., as a memorial of the munificence of Sir Henry Jardine to him, to which he owed the advantage of his education at the University of Edinburgh. Candidates must be natives of Scotland. The Bursar must attend the Classes, and pass the Departmental Examinations necessary for the Degree in Arts. *Bursar*—1892, John S. Begg.

XXXV. *Lennie Bursaries.*—Bursars must attend the Classes in the Arts

Curriculum. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXXVI. *Bruce Bursaries.*—Prior to the commencement of each Winter Session, five Students are presented yearly, the most distinguished of the five receiving the £40 Bursary. The Bursars must be in regular attendance on the Classes necessary for the Degree of Master of Arts. Candidates announce their names at the Council Chambers to the City Clerk.

XXXVII. The *M'Diarmid Bursary* is a memorial of the late John M'Diarmid, Esq., Editor of the *Dumfries and Galloway Courier.* Candidates must be natives of the county of Dumfries or the stewartry of Kirkcudbright. The Bursar must attend the Classes and Examinations necessary for the Degree of Master of Arts. Applications regarding the Bursary to be made to "H. Gordon, Esq., Dumfries." *Bursars*—1892, William H. Sellar.

XXXVIII. The *Patrick Bursaries* are for the assistance of those who have completed a course of education at any of the public schools or academies in the county of Ayr, where a course of Classical Study is pursued, and who are in a condition to apply for admission into the University. Their value fluctuates, being, for the first, two-thirds of the dividend on £3000 Glasgow and South-Western Railway Stock; and for the second, the remaining third of said dividend. The Bursars must attend the Classes and Examinations necessary for the Degree in Arts, in the order required by the Faculty. *See* p. 197 of CALENDAR for 1865-66. *Bursars*—1892, 1st, N. G. Lindsay; 2nd, James M. L. Brown.

XXXIX. *Ayrshire Club Bursaries.*—Awarded after competitive examination to natives of Ayrshire requiring aid, and tenable during the Curriculum in Arts, on condition of regular attendance at the Classes, with a view to the Degree. Information will be afforded by the Secretary of the Club, Mr A. H. Cooper, W.S., 8 S. Charlotte Street. *Bursar*—1891, Wm. S. Nicholson; 1892, George H. Donald.

XL. *Peeblesshire Bursaries.* — Candidates must be natives of Peeblesshire, must have been educated within the county, and must pursue the Curriculum of Arts, at this University, with a view to the degree in Arts. A bursary of £20 is given by the Society; one of £10 by Mr Tod of St Mary's Mount, the latter tenable in any Scottish University. Apply to the Secretary of the Society, Mr James Stirling, 27 East Claremont Street.

XLI. and XLII. *Caithness and Rhind Bursaries.* — Bursars must attend Classes in Arts Curriculum. Apply to Secretary of the Association.

XLIII. *Bruce of Grangehill and Falkland's Bursaries.*—Three of these Bursaries, of the annual value of £35, are awarded after competitive examination to Students of the *second* year in their course of study for a Degree in Arts; and three others, of the annual value of £20, to Students entering the *first* year of the Arts Curriculum. *Bursars*—First year, 1890, William Harvey, J. W. Duffus, George R. T. Ross; 1892, Frank Young. Second year, 1891, W. W. M'Kechnie; 1892, William J. Keith, D. B. Waters, for 1½ years.

XLIV. *Horslichill-Scott Bursaries.*—Annual value £35 to £41, under deduction of £6, 6s. for Examiners' fees from first year's payments. Open to Students in the *third* year of their course for a Degree in Arts, and tenable for two years.

The examination is in Classics, Mathematics, and Logic and Metaphysics. Deed of Foundation, at p. 208 of CALENDAR for 1866-67. *Bursars*—1892, John A. Johnston.

XLV. The *Harrison Bursary* is of the annual value of £32, under deduction of £6, 6s. of Examiners' fees from first year's payments. Open to Students in the *third* year of their course in the Faculty of Arts, with a view to a degree, and is tenable for two years. It is to be awarded to the competitor who shall show the greatest proficiency in Classics, Mathematics, and Logic and Metaphysics. *See* Deed of Endowment, p. 231 of CALENDAR for 1867-68. *Bursar*—1891, T. G. Bailey.

XLVI. *Spence Bursaries.*—By the regulations of the Governors, two Bursaries, each of the annual value of £30 for the first year and £40 for second year of tenure, are open only to Students who have studied in the University of Edinburgh, at the commencement of their second session in a three years' curriculum, or of their third session in a curriculum of four years. Examination in Latin, Greek, and Mathematics. Governors may award to any Bursar who has graduated or passed all the examinations for a Degree in Arts, a Bursary of £50 for one year, tenable in any of the other Faculties. See Scheme, p. 520 of CALENDAR 1889-90. Candidates apply to Mr Henry A. Patullo, Writer, Bank Street, Dundee, Factor to the Trust, for particulars.

XLVII. *Border Counties and Sir Walter Scott Bursaries.*—Candidates must be natives of the counties of Roxburgh, Berwick, or Selkirk, and must attend the classes necessary for a Degree in Arts. Application to be made to Mr T. Usher, Sheriff Court House, Edinburgh. *Sir W. Scott Bursar*—1889, John Henderson. *Border Counties Bursar*—1891, John K. Graham.

XLVIII. *Argyllshire Bursary.*—To be held by natives of Argyllshire, Bute, or Western Islands. The holder must attend the classes necessary for a Degree in Arts. Application may be made to John Maclachlan, Esq., W.S., 43 Castle Street, Edinburgh.

XLIX. *Ardvorlich Bursary.*—Open to Students of Arts, natives of the parishes of Comrie, Balquhidder, Callander, or Killin, failing whom, to natives of Perthshire, and failing such, to the best qualified candidate. The holder must attend Arts or Science classes. Application to be made to the Clerk of Senatus. For remodelled Foundation, see CALENDAR 1887-88, p. 501; for original deed, see p. 275 of CALENDAR for 1870-71. *Bursar*—1890, J. F. Cameron.

L. *Cowan Bursary.*—Candidates must be about to enter the Curriculum in Arts. Annual value for first two years £30, and £20 for third year, to be held alternately at Edinburgh and Glasgow Universities. Information will be afforded by J. G. M'Skimming, Esq., Ayr.

LI. *Sibbald Bursaries.*—The Bursaries are available to Students in the Faculties of Arts, Medicine, Law, or Divinity, and are open to Students entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other Bursary or Scholarship;* but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. See CALENDAR for 1888-89, pp. 171 and 177.

Application to be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1890, Hugh M'Calman, George Hart; 1891, Chas. P. Edgar, James Y. Simpson; 1892, William Eggeling.

LII. *The Angus Club Bursary.*—Open to Forfarshire students entering the University for the first time. Application should be made to the Secretary of the Club, Mr T. S. M'Laren, W.S., 11 Hill Street.

LIII. *Orkney and Zetland Bursary.*—Open to first year's Students (male or female), natives, or children of parents who are natives of the County of Orkney and Zetland. It is tenable for three years. The Bursar must attend the Classes in the Curriculum in Arts, with a view to a Degree. Applications to be sent to Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh. The Deed of Foundation will be found in CALENDAR for 1873-74, p. 329.

LIV. *Grierson Bursaries.*—Four Bursaries of £20 each, and one of £26, awarded annually in November, under the patronage of the Senatus. They are restricted in the first place to natives of either of the parishes of Crawford or Leadhills, who must pass an examination, satisfactory to the Senatus, in Elementary Latin, English, and Arithmetic. In the event of more than one preferential Candidate, the examination is competitive among such candidates. If no preferential Candidates, the Bursaries are thrown open for competition to all Students then intending to enrol in the University for the First Session of the Curriculum in Arts, the subjects of examination being those prescribed for Bursars of the First Year. *See* Trust Disposition of Founder at p. 335 of CALENDAR for 1873-74, and p. 368 of the CALENDAR for 1877-8. *Bursars*—1889, W. G. Napier; 1890, E. M. Beilby, James Paterson. 1891, Robert L. Ross, Peter M'Gregor, Arthur G. Edie.

LV. *Lanarkshire* (Upper Ward of) *Bursaries.* — Bursars must attend the Classes in the Arts Curriculum. Mr R. Brown, Secretary, 28 St Andrew Square. *Bursar*—1888, J. D. P. M'Letchie.

LVI. *Johnstone of Harthope Bursary.* Natives of Moffat, Peebles, and Students of the name of Alexander or Johnstone preferred, if preferential candidates announced to Secretary of Senatus before 1st of October. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *See* Deed of Foundation, at p. 350 of CALENDAR for 1875-76. *Bursar*—Archibald Alexander.

LVII. *Lambert Bursary.*—This Bursary cannot be instituted until after the death of an annuitant. *See* Deed of Foundation, at p. 342 of CALENDAR for 1875-1876.

LVIII. *Marshall Bursary.*—Restricted in the first place to relatives of Founder, next to Students of the name of Marshall, and natives of West Lothian. *See* Deed of Foundation, at p. 347 of CALENDAR for 1876-77. *Bursar*—1892, John Chalmers.

LIX. *Fothringham and Forrest Bursaries.* Relatives or namesakes of the Founder, then such as are of the name of Forrest, to be preferred. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *Bursars*—1890, C. A. Macpherson.

LX. *Earl of Zetland's Bursaries.*—These Bursaries are open to First Year Students in the Faculty of Arts, who are natives of the Islands or County of

Orkney and Zetland, or children of parents, one or both of whom shall have been born in or connected for a long period of years with the said Islands or County. For Deed of Foundation of these Bursaries, *see* p. 373 of CALENDAR for 1877-78. Application to be made to Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh.

LXI. *Edinburgh East Lothian Association's Bursary.*—The Bursary may be competed for by any lad under the age of 18, who has been educated at any school in East Lothian, or who, having passed through all the standards or their equivalents at such schools, shall have afterwards attended for not more than three sessions any secondary school within or without the county. Application may be made to J. Purves, S.S.C., 65 Frederick Street.

LXII. *Edinburgh University Endowment Association's Bursaries* are open to Students entering the Faculty of Arts for the first time, are tenable for three years, and the Examination is held at the annual Arts Bursary Competition. Bursars must proceed through the Curriculum in Arts, and pass the Examinations for the Degree of M.A. Lapsed Bursaries may be awarded for one year to Students of the first or any year, whose merits have been attested in the usual Bursary Examination of their year. Cannot be held with any other Bursary in any Scottish University. *See* Minute of the Endowment Association, among Deeds of New Foundations, p. 375 of CALENDAR for 1878-9. *Bursars*—1890, Thomas Pullar, Stuart Robertson, Drummond S. Ross; 1891, William E. Hutchison, James Masson, John Thomson; 1892, Arthur H. Firth, Marshall N. G. Gray, C. C. Watson.

LXIII. *Gillan Bursaries.*—Founded in 1878 by James Gillan, draper, Forres. These Bursaries are for the support at the University, and at the New College, Edinburgh, of two young men connected with the parish of Forres, and one connected with Dyke, who have declared their intention to study for the ministry of the Free Church of Scotland. For particulars apply to Messrs R. & R. Urquhart, Solicitors, Forres.

LXIV. *Thomson Bursaries.*—Candidates of the name of Thomson or Traquair, or natives of town or county of Dumfries or city of Edinburgh, preferred. *See* Deed of Foundation, p. 367 of CALENDAR, 1877-8, and Scheme of Allocation, p. 346 of CALENDAR, 1879-80. Applications to be made to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street. *Bursars*—1889, A. Claud Montgomerie Bell; 1890, G. Scott Dalgleish. 1891, F. Guthrie Smith; 1892, Robert Gray.

LXV. *Patterson Bursary*, in Anglo-Saxon, Grammar, and Literature. To come into operation on the death of an annuitant. *See* Deed of Foundation at p. 379 of CALENDAR for 1880-81.

LXVI. *Highland and Agricultural Society's Bursaries.*—The Society annually grants £200 for ten Bursaries of £20 each, tenable for one year, at the University of Edinburgh, for the purpose of enabling the holders to take the classes necessary to qualify for the Society's Certificate or Diploma, to be determined by examination held in Edinburgh by the Society's Examiners.

LXVII. *John Welsh Bursaries*, founded by Thomas Carlyle in 1881, in memory of his Father-in-law, to whom the estate of Craigenputtock in Dumfriesshire, bequeathed by Mr Carlyle to the University of Edinburgh, formerly belonged. The Bursaries are paid from the rents of that estate, and are eight in number, of the value of about £20 each, tenable for four years. They are awarded, after competition, to Students entering the University, who have not studied in any other University. Four are to be given to the competitors most proficient in Mathematics, and four to those most proficient in Classics. They are not to be held with any other Bursary. *See* Deed of Foundation at p. 379 of CALENDAR for 1881-82. *Bursars*—(*Classical*)—1890, Walter R. Henderson, W. W. M'Kechnie; 1891, George A. Davidson, Robert White. (*Mathematical*)—1890, J. Hossell Henderson, A. G. Burgess; 1891, Francis Dewar, Frederick A. Barnardo; 1892, Lapsed Bursary, W. C. Morton for 3 years.

LXVIII. *Mackinnon Bursaries.*—Three Bursaries about £18, 15s., tenable for three years, to encourage the study of the Mechanical Sciences. Each Bursary is open for competition to Students entering their First Session in the Faculty of Arts. Candidates must be natives of the counties of Argyll, Bute and Arran, Inverness, Ross or Sutherland, and must be able to speak the Gaelic language. The Examination is held at the annual competition for Bursaries at the beginning of each Session, with an additional examination by the Professor of Celtic; at least 10 per cent. of the total marks attainable being assigned to Gaelic. Each Bursar is bound to attend at least two classes in the Faculty of Arts during his tenure, and among these six classes, at least one class of Mathematics, one of Natural Philosophy, and the class of Engineering. The Bursary cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding an annual income of £50 or upwards, and is tenable only during good behaviour and proficiency. *Bursars*—1890, Farquhar C. Macrae, J. M. Macdonald; 1891, Norman C. MacDonald; 1892, George MacLennan, Alex. M. Murchison.

LXIX. *Whitelaw Bursaries.*—In memory of James Whitelaw, Watchmaker. Three Bursaries, about £23 each, tenable for three years, open to Students about to enter, or who follow the Curriculum in Arts. Cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding £50 annually, or upwards. Examination in October annually. *Bursars*—1891, Jas. Y. Simpson, John Macaskill, Donald Macdonald.

LXX. The *Renton Bursary*, founded by the Trustees of the late William Renton, 20 Royal Terrace, Edinburgh, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of them as he may consider proper, and who may require assistance. The Bursary is tenable for one year, and cannot be held by any one under the age of sixteen or above twenty-one. It is filled up in November each year. The Examination is conducted each year by the Assistant to one of the Professors of Natural Philosophy, Chemistry, and Mathematics in turn, and in the above-named order. *Bursar*—1892, R. C. V. Carey.

LXXI. The *Macdougall Bursaries* are open to Students of Edinburgh, Glasgow, and St Andrews Universities. Students attending the Gaelic Class to be preferred. The Bursaries cannot be held with any Bursary or appointment yielding £50 per annum. *See* Deed of Foundation at p. 435 of CALENDAR 1885-86. Application may be made to Mr W. C. Young, solicitor, Perth.

LXXII. *Newton Bursaries.*—Two are awarded annually, one to the most distinguished Student in the Junior Class of Natural Philosophy, and one in the Senior (Second) Class of Mathematics. The Bursaries are tenable for two years, and the Bursars must continue their studies in the higher branches of the subjects of their Bursaries, and at the end of the second year of tenure, either take Honours in Mathematics and Natural Philosophy, pass the 2nd B.Sc. Examination, or give other evidence of advanced study in Mathematics or Natural Philosophy. These Bursaries are not to be held with other Scholarships or Bursaries. *See* Deed of Foundation, p. 460 of CALENDAR, 1886-87. *Bursars* (*Math.*)—1893, William Jeffrey; (*Nat. Phil.*)—1893, A. C. Smith.

LXXIII. *Mann Bursaries.*—(1.) Candidates must be children of residents in the town of Nairn, *i.e.*, one or both parents must have resided within the municipal boundaries for at least twelve months at any period prior to the competition. (2.) Applications must be lodged with the Clerk of Senatus at least three weeks before the Annual Bursary Examination of the University, along with evidence of compliance with Rule I. (3.) One will be awarded annually to the candidate, matriculating for the first time in this University, who obtains the highest marks at the Entrance Bursary Examination in English, Latin, Greek, and Mathematics, provided the Examiners be satisfied with the standard he has attained. (4.) Each will be tenable for three years, value about £25 per annum. (5.) Failing candidates of the first year, the vacant Bursary will be awarded as a second year Bursary to the candidate who obtains the highest marks in the Bursary Examination for the second year; and, failing candidates of the first and second years, it will similarly be awarded as a third year Bursary. When awarded under this Rule it is tenable for one year only. (6.) Failing candidates qualified under Rule III. or Rule V., the Senatus may continue one of the Bursaries to its holder for a fourth year, provided he propose to continue his studies for a fourth year in some special subject. (7.) Each Bursar must be *bona fide* engaged in studying for a Degree in Arts or in Science, and must produce evidence at the end of each Winter Session that he has attended at least two classes in the Faculty of Arts, or in a Department of Science, and has made reasonable progress in his studies. (8.) Any breach of these regulations, or conduct unworthy of a scholar and a gentleman, will be punished by forfeiture of the Bursary. See Deed of Foundation, p. 497 of CALENDAR 1887-88, and Regulations at p. 544 of CALENDAR for 1890-91. *Bursars*—1889, Thomas Fraser, James Tolmie; 1890, John Rose; 1892, A. M. Mackay, for one year.

LXXIV. *Allan Bursaries.*—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

LXXV. *James Fairbairn Bursary*, founded by Mrs Kidd of Palmyra, Aigbarth, near Liverpool, in memory of James Fairbairn, late Governor of Heriot's Hospital, is open to competition to first year Students, and is tenable for four years. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursary cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 501 of CALENDAR, 1887-88. 1889, R. P. Davidson; 1892, D. A. Macnaughton, for year and a half.

LXXVI. *Jardine of Thorlieshope Bursaries.*—Natives of the rural districts of Roxburghshire and Dumfriesshire (villages and towns of the population of 2000 and upwards being excluded), who have attended the Public or Board Schools in said counties, to be preferred. In the event of there being no first year Candidates, the Bursaries will be thrown open to Candidates of the second, third, or fourth year in succession, but will be tenable for one year only. The Bursars are required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursaries cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 497 of CALENDAR, 1887-88. *Bursars*—1889, George White; 1890, Richard C. Davidson; 1891, William M'Clymont; 1892, W. W. Smith.

LXXVII. *MacKenzie* (*Stornoway*) *Bursary.*—Candidates of the name of MacKenzie have a preference. The Examination is in Latin, Greek, Mathematics, and English, and the Bursary will be awarded to the Candidate who stands highest, provided he has reached the standard of the Three Years' Curriculum Examination in at least two subjects. Failing a preferential Candidate, the Bursary will be thrown open to competition as a first year Bursary in Arts. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the course. For Regulations, &c., see p. 521 of CALENDAR for 1889-90. This Bursary will not be instituted until the death of a liferenter.

LXXVIII. This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

LXXIX. Six Bursaries, each of the annual value of £25, and tenable for three years in the Faculty of Arts. They are open to Students who, having passed the Preliminary Examination, are entering on the first year of the Course in Arts, and are studying for the Ministry of the Church of Scotland. For conditions of tenure and subjects of examination, apply to the Rev. Dr Langwill, Currie, or to Rev. John Patrick, B.D., Greenside, Edinburgh.

LXXX. *Bailie Cousin's Bursary* is open for competition to Students entering the Faculty of Arts on a regular course for the Degree of M.A. The holder must regularly pass the departmental examinations appropriate to each year. The Bursary cannot be held along with any Fellowship, Scholarship, or Bursary of any Scottish University, or with any situation or appointment yielding an annual income of £30 or upwards. For Deed of Foundation see CALENDAR 1891-92, page 536. *Bursar*—1891, A. Croom Paterson.

LXXXI. *Maule Bursaries.*—These Bursaries are for the education of poor and deserving Students. They may be held by Students prosecuting their studies in any of the Faculties. The Examination is in Latin, Greek, Mathematics, and English for preferential Candidates. See Deed of Foundation, p. 543 of CALENDAR for 1891-92.

LXXXII. *The Donald Fraser Bursary* is awarded for high merit in the University Class of Natural Philosophy, combined with proficiency in Laboratory Work. The Bursar is required to give assistance in the University Physical Laboratory, and to engage in research there. The Bursary cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. See Deed of Foundation, p. 545 of CALENDAR for 1891-92. 1893—*Bursar*, W. Thomson.

II.—PRIZES.[1]

I.—THE LORD RECTOR'S PRIZE.

The Lord Rectors since 1879 have, during their respective tenures of office, offered a Prize of Twenty-five Guineas annually, for the best Essay on a Historical Subject. The following are the names of the prizemen :—

1888. Geo. Wilton Wilton, B.L.
Prox. access., Hotchkin Haynes Murray
1889. Stewart Alan Robertson.
1890. James Wallace.
1891. John Davidson, M.A.
1892. *Not awarded.*

II.—EDINBURGH UNIVERSITY CLUB (OF LONDON) TRIENNIAL PRIZE.

A Prize of Twenty Guineas, open triennially, for competition in any of the Faculties by Graduates of not more than two years' standing, is offered by the Edinburgh University Club of London, for the best Essay on a subject prescribed by the Deans of the Faculties in rotation, subject to the approval of the Senatus. The Prize will be open in 1894.

1890. No award.
1891. *John Davidson, M.A.*

III.—BRUCE OF GRANGEHILL AND FALKLAND'S PRIZE IN THE CLASSES OF LOGIC AND METAPHYSICS.

This Prize of £20 (with a supplementary Prize of £10 for the Junior Division of the Class) is awarded to the most distinguished student in this class, "on such conditions and competition as the Professor may direct, and on his decision," for excellence in the study of Logic and Metaphysics. It was founded in 1865, by Mrs Tyndall Bruce of Grangehill and Falkland, in commemoration of John Bruce, Professor of Logic and Metaphysics in the University, 1774-1786.

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[1] The names of University Prizemen are retained in the CALENDAR for five years.

1889. Charles M. Douglas, M.A.
1890. James Mitchell.
1891. Henry Barker.
1892. Hugh R. Mackintosh, M.A.
1893. *H. P. Macmillan, M.A.*

IV.—GRAY PRIZES.

The Gray Prize Essay Fund was instituted in 1851, in terms of the Will of Simon Gray, Esq., of Mornington Crescent, London.

The Gray Trustees offer annually for competition, three prizes of £20, £10, £5 respectively, for the First, Second, and Third Essays in the order of Merit, on a subject to be intimated annually in the CALENDAR under Prizes open for the year.

For particulars apply to the Rev. W. Ritchie, D.D., Duns, Secretary to the Trustees.

The awards for the Session 1891-92 were as follows:—

1st Prize, W. F. Foster, Edinburgh.
2nd Prize, R. H. K. Clark, St Andrews.
3rd Prize, J. J. B. Baillie, Haddington.

V.—DR MUIR'S PRIZES IN SANSKRIT AND COMPARATIVE PHILOLOGY.

In accordance with the intentions of the late Dr John Muir, and with the concurrence of Sir William Muir, the sum of £100, offered by Dr Muir in 1872 as a prize to the first candidate who should take the degree of Doctor of Science in Sanskrit and Comparative Philology within five years,—afterwards renewed, on the same terms, for another period of five years,—has now, together with the interest, been appropriated by the Senatus for Sanskrit and Comparative Philology Class Prizes. It is left to the discretion of the Professor to offer Class Prizes, not exceeding £25 in the aggregate, for competition.

1889. G. A. Ferguson
,, J. E. Wood
1889. A. E. O'Flaherty
1890. John Maclennan
,, E. Monteith Macphail
1891. John Maclennan, M.A.
1891. William Menzies.
,, John M. Tait.
1892. No award.
1893. *Charles S. Edgar.*
,, *William Eggeling.*

VI.—SCOTT AND DUNBAR PRIZE.

This Prize, of the value of about £18, was founded in 1872 by the Rev. Hew Scott, D.D., of Anstruther Wester, for encouraging the study of the Greek Language in the University of Edinburgh. It is awarded to "the most deserving and learned student in the Greek

Classes," after such Examination as may be directed by the Principal and the Professors of Divinity, Greek, and Humanity. The prize will not be awarded till further notice. *See* Deed of Foundation at p. 332 of CALENDAR, 1873-74.

1888. J. A. Norrie / James Watt } equal
1889. Patrick Duncan
1891. R. P. Davidson.

VII.—THE COUSIN PRIZE.

This Prize, founded in connection with the Class of Fine Art by the late David Cousin, Esq., is of the annual value of about £14, 14s. 6d., and is awarded at the close of each session for proficiency in Class Essays set from time to time by the Professor. *See* Excerpt from Mr Cousin's will in CALENDAR 1880-81, p. 380.

1888. David J. Vallance
1889. Johnstone Murray
1890. Duncan Mackenzie
1891. J. Malcolm Tait.
1892. W. M. Souter, M.A.
1893. *Henry Barker.*

VIII.—KELLAND MEMORIAL PRIZE.

The Committee for promoting a Memorial to the late Professor Kelland has handed over to the University the sum of £147, 10s., for the purpose of founding a Prize to be called the "Kelland Memorial Prize," to be awarded annually to the most distinguished Student in Pure Geometry in the Junior Mathematics Class.

III.—SCHOLARSHIPS.[1]

I.—PITT CLUB CLASSICAL SCHOLARSHIP.

The Pitt Club Scholarship of the annual value of £57, 10s. 4d., tenable for four years. By ordinance No. 17 of the Scottish Universities' Commissioners it is open for competition to all who have passed regularly through the Course in Arts in the University, and have been admitted to the Degree of M.A. in Edinburgh, at any time within four years before the competition takes place. The subjects embraced in the examination are CLASSICS and ENGLISH LITERATURE. The next competition may take place in December 1896.

1888. Norman M'Lean, M.A.
1892. *Thomas Ross Mills, M.A.*

II.—MACKENZIE CLASSICAL SCHOLARSHIP.

This Scholarship was founded in 1862, by James Mackenzie, Esq., W.S., and is of the annual value of £121, 10s., tenable for four years. By ordinance No. 90 of the Scottish Universities' Commissioners, it is open for competition to all Graduates in Arts in the University of Edinburgh of not more than three years' standing at the time of the competition. Candidates are examined in CLASSICAL LITERATURE and in ENGLISH LITERATURE, and the Examination is conducted by three or more Examiners selected by the Senatus from their own body. It cannot be held along with any other Scholarship, Fellowship, or Bursary, of any Scottish University. The Examinations include—1. Translations from Latin and Greek authors; 2. Composition in Latin and Greek Prose; 3. Latin and Greek Literature, and History; 4. English Essay-Writing; 5. History of English Literature. The next competition may take place in December 1896.

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[1] The names of University Scholars are retained in the CALENDAR for five years.

1888. George Smith, M.A. | 1892. *William G. Wedderspoon, M.A.*

III.—SIR DAVID BAXTER MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £61, 15s. 10d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-5, p. 171) it is awarded for proficiency in the department of Mathematics, particularly in that branch of it which includes mechanical and physical science. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mathematics. The next competition may take place in December 1893.

1890. *Charles E. Grange, M.A.*

IV.—SIR DAVID BAXTER PHILOSOPHICAL SCHOLARSHIP.

This Scholarship, also founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £61, 15s. 10d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-5, p. 171), it is awarded for proficiency in the Department of Mental Philosophy. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mental Philosophy. The subjects of examination are Logic, Metaphysics, and Moral Philosophy. The next competition may take place in December 1894.

1886. George W. Stewart, M.A. | 1890. *Duncan MacKenzie, M.A.*

V.-VII.—JOHN EDWARD BAXTER SCHOLARSHIPS.

These Scholarships were founded in 1876, and are three in number, each of the annual value of about £91, 18s. 6d., and tenable for three years. One is in the Department of Classical Literature, another in Mental Philosophy, and the third in Mathematics and Natural Philosophy. They are open for competition to all Masters of Arts of the University of not more than three years' standing at the time of the competition. The Scholarship in *Philosophy* may be competed for in December 1893. *See* Deed of Foundation at p. 361 of Calendar for 1877-78.

1888. David B. Mair, M.A. (Ma.)
1889. Patrick Duncan, M.A. (Cl.)
1890. W. G. Smith, M.A. (Ph.)
1891. W. E. Philip, M.A.
J. I. Craig, M.A. (Ma.) equal
1892. *James Watt, M.A.* (Cl.)

VIII.—DRUMMOND MATHEMATICAL SCHOLARSHIP.

This Scholarship was founded in 1865 by Miss Elizabeth Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland. It is of the annual value of £105, 12s. 6d., and is tenable for three years. By the Deed of Foundation (given at p. 198 of CALENDAR for 1865-6), it is open to Graduates in Arts of not more than three years' standing, who have graduated with Honours in the Department of Mathematics. It cannot be held with any other Bursary or Scholarship, and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical application of Mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures examined by him, and the Mathematical principles exemplified thereby; which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh. The next competition will take place in December 1893.

1890. *James Goodwillie, M.A.*

IX.—BRUCE OF GRANGEHILL AND FALKLAND'S CLASSICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for three years, during two of which the studies of the Scholar must be prosecuted in the University of Edinburgh, but in the third year they may be prosecuted in an English or Foreign University. By the terms of the Deed of Foundation (given at p. 205 of the CALENDAR for 1866-7), this and the two following Scholarships held by Students who have passed their Examinations for the Degree of Master of Arts with Honours, being hitherto conferred upon the most distinguished in that one of the Honours Departments which is appropriated for each year. The Scholarship cannot be conferred upon any one whose age exceeds twenty-three years, and it cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 per annum.

In the event of the Scholarship becoming vacant during the period of tenure, through resignation or otherwise, of the Scholar, then the sum falling in shall be bestowed by the Senatus for the remaining period of tenure on a Student attending the Divinity Classes who shall be reported by the Faculty of Theology to be a meritorious Student and deserving of the Scholarship. The next award may be made in April 1894.

1888. James G. Goold, M.A.
1891. *W. G. Wedderspoon, M.A.*

X.—BRUCE OF GRANGEHILL AND FALKLAND'S SCHOLARSHIP IN MENTAL PHILOSOPHY.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Logic and Psychology, Metaphysics, Moral Philosophy, and History of Philosophy. The next award will be made in April 1895.

1889. W. G. Smith, M.A.
1892. *Hugh R. Mackintosh, M.A.*

XI.—BRUCE OF GRANGEHILL AND FALKLAND'S MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Mathematics and Natural Philosophy. The next award may be made in April 1896.

1890. Charles Tweedie, M.A.
1893. *Neil Macmichael, M.A.*

XII.-XIII.—GRAY SCHOLARSHIPS.

These two Scholarships, founded by Mr Gray of Baad Park in 1864, are each of the annual value of £43, 7s. 6d., and tenable for a period not exceeding two years. All candidates must pass the Examination for the Degree of Master of Arts. In making appointments the Senatus are directed to prefer in the first place candidates of the name of Gray; and secondly, such as have been born in the parishes of Midcalder or Kirknewton. Failing well qualified Candidates, who fulfil these conditions, the Scholarships may be awarded to distinguished candidates for the Degree in Arts in the Honours departments.

The scholars must proceed to study in one of the Faculties of Divinity, Law, or Medicine.

1888. William Gray, M.A.
1889. Walter T. Watson, M.A.
1890. Arthur Herbert Gray, M.A.
1891. W. E. Philip, M.A.
1892. Robert G. M'Kerron.
1893. *Alexander H. Gray, M.A., Preferential Candidate.*

XIV.—GILCHRIST SCHOLARSHIPS.

These Scholarships were founded in 1865 by the Trustees of the late Dr Gilchrist; they are three in number, each of the annual value of £100, and are open to natives of India who have passed competitive examinations at the Presidential Colleges of India. They are attached to the Medical, Law, and Literary Classes in the University.

XV.-XVII.—MISSES BAXTER OF BALGAVIE'S SCHOLARSHIPS.

These Scholarships were instituted in 1868 and 1878 by Miss Mary Baxter of Balgavie. They are three in number, two of the annual value of £40, the third of £20. They are in the gift of the Directors of the High School of Dundee, and are open for competition to all pupils who shall have finished their course at the time, or within one year previously, at that School. The examination is held in Dundee by examiners appointed by the Directors, and the subjects are Geometry, Algebra, Trigonometry, and Mechanical Drawing. The Scholarships are tenable for one year certain, and for a second if a favourable certificate is sent to the Directors by the Senatus Academicus. The patrons may extend the tenure of these Scholarships for a further period of one year, provided the holder shall have previously passed the First Examination for the Degree of Bachelor of Science in the Department of Engineering in this University. The Classes to be attended in the first year are Mathematics, Natural Philosophy, and Engineering; in the second year Chemistry, Engineering, and the second course of Natural Philosophy, and for the third year any two classes to be selected by the student, and approved by the Senatus.

These Scholarships are not to be held with any other Scholarship, Fellowship, or appointment yielding £50 per annum. *See* Deeds of Foundation, at page 255 of the CALENDAR for 1869-70, at p. 372 of CALENDAR for 1878-79, and at p. 377 of the CALENDAR for 1881-2.

XVIII.-XIX.—FETTES EXHIBITIONS.

These Exhibitions are each of the annual value of £60, and are tenable for four years. They are open annually for competition, one among the Foundationers alone, and the other among the Foundationers and such other pupils as have attended Fettes College regularly for not less than five years.

XX.-XXI.—RHIND SCHOLARSHIPS.

These Scholarships were, in accordance with the will of the late A. H. Rhind, Esq., of Sibster, founded by his trustees on the reversion of his estate. They are two in number, one in the Department of

Classical Literature, the other in that of Philosophy, are each of the annual value of £98, 10s., are tenable for not less than two years, or more than three years, and are open to Undergraduates and to Graduates of not more than three years' standing at the time of the competition. Candidates who are Undergraduates must have completed at least three Sessions in the regular Curriculum in Arts, and have obtained at least two Departmental Certificates. The successful Candidates may be required to undertake duties connected with the teaching of the University, or otherwise assist in some department of its operations. *See* Deed of Foundation at p. 323 of CALENDAR for 1874-75. The next competition may take place in December 1894.

1888. Wm. Ingram, M.A. (Ph.)
1888. Thomas R. Mills (Cl.)
1891. Lapsed Scholarship in Philosophy, John Davidson.
1891. *J. Lewis M‘Intyre, M.A.* (Ph.)
,, *R. P. Davidson, M.A.* (Cl.)

XXII.—SCHOLARSHIPS IN MUSIC.

By the will of Signor Theophile Bucher, who died in 1871, his trustees were enjoined (on the death of a liferentrix, who died in March 1889) to pay over the residue of his estate, amounting to about £4000, to the Senatus and Curators of the University for the purpose of founding one or more Scholarships of music to be held by any young men born in Scotland, who may shew a natural talent for music and wish to make it their profession, for the purpose of improving their education, and enabling them to prosecute the study of the science and art of music in Italy, Germany, and France.

XXIII.—THE CHARLES MACLAREN SCHOLARSHIP.

This Scholarship, founded in 1871 by the Trustees of Mrs Maclaren, in memory of Charles Maclaren, Esq., the eminent geologist, is of the annual value of £95, 19s. 2d., and is tenable for three years. It is for the encouragement of the study of Mathematics and Natural Philosophy, and is open to all graduates in Arts of not more than three years' standing at the time of the Competition (and under 30 years of age) who shall have taken honours in Mathematics. The successful competitors are to spend a few months in travelling and in examining remarkable Engineering and Architectural Structures, and to report to the Senatus, which report the Senatus may cause to be publicly read in the University. The Deed of Foundation is given at p. 324 of CALENDAR for 1873-74. The next competition may be in December 1894.

1890. *Jas. F. M‘Kean, M.A.*

XXIV.—NEIL ARNOTT SCHOLARSHIP FOR EXPERIMENTAL PHYSICS.

This Scholarship, value about £38, 10s., was founded in 1874, and is awarded annually to the most distinguished Student in the Physical Laboratory of the University.

The recipient must, during the ensuing Summer and Winter Sessions assist the Professor of Natural Philosophy in the Laboratory. Failing a Student deemed by the Professor worthy of the Scholarship, it may be given to the Candidate for a Degree in Arts who has undergone the Examination in Natural Philosophy with most distinction. *See* Deed of Foundation, at p. 340 of CALENDAR for 1875-76.

1889. James Rennie.
1890. P. F. Gillies.
1891. T. C. Baillie.
1892. H. Walker.
1893. *J. A. Macdonald.*

XXV.-XXVII.—FERGUSON SCHOLARSHIPS.

The examination of Candidates for Three of these Scholarships, each of the annual value of £80, and tenable for three years, will be held in Glasgow, on Tuesday, 26th September 1893, and following day. One of the Scholarships to be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics, including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Metaphysics, and Ethics.

The Competition will be open to all persons who have passed the last of the Examinations required for the degree of Master of Arts in one of the Universities of Scotland (whether taking the degree at the same time or not) within two years immediately preceding, and who have not already gained one of these Scholarships or competed more than once previously for any of them.

For further information apply at the Office of The Ferguson Bequest Fund, 94 Bath Street, Glasgow.

The following Students of the University of Edinburgh have obtained Ferguson Scholarships during the last five years:—

1888. David Beveridge Mair, Math.
,, T. E. Sandeman, M.A., Phil.
1889. James Cruickshanks Smith, M.A., Cl.
1890. Patrick Duncan, M.A., Cl.
1890. Charles Mackinnon Douglas, M.A., Phil.
1891. James Holm, of Glas. and Edin. Universities, Math.
,, Henry Barker, M.A., Phil.

PRESENT HOLDERS OF THE SCHOLARSHIPS.

1892. *Wm. Edward Philip*, M.A., of Edin. Univ. Mathematical.
,, *Hugh Ross Mackintosh*, M.A., of Edin. Univ. } Philosophical.
,, *David Irons*, M.A., of St Andrews University. }
Classical Scholarship not awarded.

XXVIII.-XXXIX. VANS DUNLOP SCHOLARSHIPS.

Twelve Vans Dunlop Scholarships, each of the annual value of £100, and tenable for three years, are, by the Deed of Foundation, appropriated to the following subjects:—1. English Literature and Poetry; 2. Classical Learning—Latin and Greek; 3. Engineering and the Mechanical and Useful Arts; 4. Commercial and Political Economy and Mercantile Law; 5. Logic and Metaphysics; 6. Natural Philosophy; 7. Mathematics; 8. Hebrew and Oriental (Semitic) Languages; 9. History; 10. Moral Philosophy; 11. Sanskrit; 12. Agriculture. In terms of the Trust-Disposition (which is given at p. 380 of Calendar for 1880-81), the Scholarships are given only for "distinguished proficiency" in the various subjects of competition, as determined by the Examiners and the Senatus Academicus.

The following are the General Regulations for the Examinations:—

In the Competitions for these Scholarships, Candidates must have regularly attended in at least one class in the University of Edinburgh during each Winter Session in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University for more than one year.

Each Scholarship is tenable on condition that the Scholar submits annually to the University evidence that he is prosecuting his studies, or his professional work, in a manner satisfactory to the Senatus. The evidence may consist of—(1.) Certificates of attendance on Lectures or Laboratories in this or some other University; or (2.) Certificate of having acted as Assistant to a Professor in this or some other University; or (3.) A written Report of work done by the Scholar during the year, together with a Thesis composed by himself on a subject connected with that work.

Not more than one of these Scholarships can be held by the same person, and Vans Dunlop Scholars cannot hold any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates for each of the Vans Dunlop Scholarships must enter their names and addresses *at least one month* before the date of the commencement of each examination, at the *Secretary's Office, University, Edinburgh*, and produce evidence that they have fulfilled the conditions as to eligibility of Candidates.

In the case of Scholarships where attendance on classes may be discontinued for not more than one year, Candidates are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the Vans Dunlop Scholarship examinations may be published.

XXVIII.—English Literature and Poetry.

Candidates are subjected to an Examination testing—(1.) Knowledge of the History of English Literature generally, and more particularly through a prescribed period; (2.) Acquaintance with certain books, chiefly of English Poetry, prescribed for special reading; (3.) Ability in English Composition, in the form of an Essay, written in the Examination Room, on some subject of literary criticism.

The Competition is open to all Matriculated Students in the second, third, or fourth year of their Matriculation, who have given regular attendance in the Class of Rhetoric and English Literature. The next Competition will take place in April 1894.

The Professor of Rhetoric and English Literature, and an Examiner appointed by the Senatus, are the Examiners.

1891. *George Liddell.*
Proxime accesserunt, *And. Hamilton, M.A.*, and *Stewart A. Robertson.*

XXIX.—Classical Learning—Latin and Greek.

1. *Latin*—The Examination will test :—
   - (*a.*) Knowledge of Latin books and special subjects previously prescribed.
   - (*b.*) Power of Latin Composition, and of translating from Latin authors not previously prescribed.
2. *Greek.*—(*a.*) Knowledge of Greek books previously prescribed.
   - (*b.*) Power of Greek Composition, and of translating from Greek authors not prescribed.
   - (*c.*) Knowledge of Greek History and Literature.

The Competition is open to Matriculated Students in their second, third, or fourth Session who have completed attendance in the Latin and Greek Classes necessary for graduation in Arts.

Any one who in the previous April may have completed his course for graduation in Arts in three Sessions may take part in the Competition, although not actually a Student in the Session during which the Examination takes place. The next Competition will take place in October 1893.

The Professors of Humanity and Greek are the Examiners.

1890. *J. A. Norrie.*

XXX.—Engineering and Mechanical and Useful Arts.

The Examination is similar to that for the Second B.Sc. Examination for the degree in Engineering, with the addition of questions on prescribed books treating of Engineering and Mechanical and useful Arts.

The Competition is open to all Matriculated Students who have been in regular attendance on the Class of Engineering for at least two Winter Sessions, and who have not been Students of the University for more than four years. The conditions of tenure of this Scholarship may be altered before the next election. The next Competition will take place in April 1894.

The Examiners are the Professors of Engineering and Natural Philosophy.

1888. J. T. Nicolson,
1891. *J. R. Dick*, *B.Sc.*

XXXI.—COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

(*a.*) Candidates are subject to an Examination testing their knowledge (I.) of Commercial and Political Economy, and (2.) of Mercantile Law—two papers on the former and one on the latter.

(*b.*) The Competition is open to all who have been Matriculated Students for not less than two years, and who have regularly attended the Class of Commercial and Political Economy and Mercantile Law. The next Competition may take place in October 1895.

(*c.*) The Professor of Political Economy and an Examiner nominated by the Senatus are the Examiners.

1891. No award.
1892. *Cameron Morrison, M.A., LL.B.*

XXXII.—LOGIC AND METAPHYSICS.

The Examination will test knowledge of (*a.*) Psychology, (*b.*) Logic, (*c.*) Metaphysics and the History of Philosophy. It will include the subjects embraced in the Lectures on each of these branches; also prescribed Reading and Studies of special subjects.

The Competition is open to all who have been Matriculated Students for not less than two nor more than six years, and who have regularly attended the Junior and Advanced Classes of Logic and Metaphysics. The next Competition will take place in April 1894.

The Professor of Logic and Metaphysics and the Professor of Moral Philosophy are the Examiners.

1891. *Henry Barker, M.A.*

XXXIII.—NATURAL PHILOSOPHY.

The Examination will test the knowledge of the Candidates in Experimental Physics and Applied Mathematics. The Competition is restricted to Matriculated Students who have passed at least two and not more than six Sessions at the University, and who have attended the classes of Natural Philosophy. The next Examination will take place in April 1895.

The Professor of Natural Philosophy and an Examiner appointed by the Senatus are the Examiners.

1889. A. W. Duff, M.A.
1892. *J. C. Beattie.*

XXXIV.—MATHEMATICS.

The Examination will test Candidates in pure mathematical subjects in the Honours Department for the Degree of Master of Arts, and in special subjects to be prescribed by the Examiners from time to time. The Competition is confined to Matriculated Students who have passed at least two and not more than six complete Sessions at the University of Edinburgh, and who have attended at least two of the Mathematical Classes, one of these being the third or Advanced Class. No student is eligible who has discontinued attendance at the University for more than a year. The next Examination will take place in April 1895.

The Professor of Mathematics and an Examiner appointed by the Senatus are the Examiners.

1889. J. I. Craig, M.A.
1892. *William Leslie Thomson, M.A.*

XXXV.—HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all Matriculated Students (*a*) who have regularly attended Classes in the University for not less than two and not more than seven years, (*b*) who have attended at least two courses under the Professor of Hebrew and Oriental Languages.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner appointed by the Senatus. The next Competition will take place at the end of Winter Session 1895-96.

1890. James Thomson, M.A. / Charles H. Titterton, M.A. } equal.
1893. *William B. Stevenson, M.A.*

XXXVI.—HISTORY.

The Competition is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not more than six years, and who have also attended one or more courses of Lectures either by the Professor of History or by the Professor of Ecclesiastical History.

The Scholarship will be awarded by competitive examination. The Examiners are the Professor of History, the Professor of Ecclesiastical History, and either the Professor of Humanity or the Professor of Greek. The next Competition will take place in October 1895.

1889. David P. Heatley. | 1892. *John Linton, M.A.*

XXXVII.—MORAL PHILOSOPHY.

The Competition is open to all who have been Matriculated Students for not less than two nor more than six years, and who have regularly attended the Ordinary and Advanced Classes of Moral Philosophy.

The Professor of Moral Philosophy and the Professor of Logic and Metaphysics are the Examiners. The next Competition will take place in April 1895.

1889. Charles M. Douglas, M.A.
1890. W. B. Ingram, M.A.
(Lapsed Scholarship for 1 year.)
1892. *John Davidson, M.A.*

XXXVIII.—SANSKRIT AND COMPARATIVE PHILOLOGY.

The Competition is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not more than seven years; and who have also attended at least two courses under the Professor of Sanskrit and Comparative Philology.

The Examiners are the Professor of Sanskrit and Comparative Philology, and another Examiner to be appointed by the Senatus. The next Competition will take place in April 1895.

1889. Hermann Walter.	1892. *John Maclennan, M.A.*

XXXIX.—Agriculture and Rural Economy.

This Scholarship is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not more than six years, and who have attended the Class of Agriculture and Rural Economy within two years of the date of Competition. The subjects of Examination are Agriculture, Chemistry, Botany, and Veterinary Science. The next Competition will take place in April 1895.

The Examiners are the Professor of Agriculture and an Examiner nominated by the Senatus.

1889. Thos. H. Middleton, B.Sc.	1892. *T. A. Coward.*

XL.—SKIRVING SCHOLARSHIP FOR MORAL PHILOSOPHY.

This scholarship is to be founded (after the death of an annuitant) in accordance with the Will of the late David Skirving, of No. 13 Westbourne Park, London. It will be of the annual value of about £50, and tenable for three years. *See* Deed of Foundation at p. 350 of Calendar for 1876-77.

XLI.-XLIV.—LANG SCHOLARSHIPS.

This is a Bequest by the late John Lang, Esq. of Warren Park, Ayrshire, with the object of founding four Scholarships, to be called the "Lang Scholarships," one in Natural Philosophy, one in Mathematics, one in Chemistry, and one in Botany. The capital sum will be payable on the death of the survivor of two liferenters.

XLV.—STEVEN SCHOLARSHIP IN AGRICULTURE.

This Scholarship was founded in 1882 by the Misses Steven of Bellahouston in memory of their brother Moses Steven, Esq. It is of the value of £75, and is awarded annually, in connection with the Class of Agriculture, the subjects of examination being Agriculture and General and Agricultural Chemistry.

The Scholar is required to visit the annual exhibitions of the four leading agricultural societies, or such as the Professor of Agriculture shall appoint, and to report on his visit or visits to the satisfaction of the Professor of Agriculture. The Exhibitions which the Scholar is required to visit are:—

The Royal Agricultural Society of England.
The Bath and West of England Agricultural Society.

The Highland and Agricultural Society of Scotland.
Royal Agricultural Society of Ireland.

See Deed of Foundation at p. 397 of CALENDAR for 1882-83.

1889. Douglas A. Gilchrist.
1890. Henry Crabtree.
1891. John Campbell.
1892. George P. Foaden.
1893. *Alexander Goodfellow.*

XLVI.—MACKAY SMITH SCHOLARSHIP IN NATURAL PHILOSOPHY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Natural Philosophy in this University. The successful candidate is required to attend the class of Natural Philosophy, or to prosecute the study of Natural Philosophy, during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve. The next award may be made at the end of Winter Session of 1893-94.

1889. J. F. M'Kean, M.A.
1890. James Holm.
1892. *J. G. Anderson.*

XLVII.—THE ARTHUR TREVELYAN SCHOLARSHIP IN ENGINEERING.

The Arthur Trevelyan Scholarship, of about £40 per annum, is for proficiency in Engineering and the mechanical and useful arts under such conditions as the Senatus may prescribe. *See* Excerpts from Deed, p. 538 of CALENDAR for 1892-93.

IV.—FELLOWSHIPS.

I.—GUTHRIE FELLOWSHIP IN CLASSICAL LITERATURE.

This fellowship, founded in 1866 by James Guthrie, Esq., London, is of the annual value of £93, 15s., and is tenable for four years. By the terms of the Deed of Foundation (given at p. 210 of the CALENDAR for 1866-7) it is for proficiency in Classical Literature, and is open to Graduates in Arts of the University who have taken their Degree since the last competition. Students who have passed all their examinations for a Degree since the last competition, but have deferred graduating, are also eligible. It cannot be held along with any other Fellowship or Scholarship in a Scottish University. The next Competition will take place in December 1894.

1890. J. C. Smith, M.A.
1890. James Watt, M.A. (Lapsed Fellowship for two years)

II.—SIR WILLIAM HAMILTON FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1866 by the Subscribers to the fund for a Memorial to the late Professor Sir William Hamilton, and by the Association for the better endowment of the University, is of the annual value of £97, 5s., and is tenable for three years. By the Deed of Foundation (given at p. 213 of CALENDAR for 1866-67), the Fellowship is open to all Graduates in Arts of the University of Edinburgh of not more than three years' standing at the time of the competition. It cannot be held along with any other Scholarship or Fellowship in a Scottish University. The subjects of examination are Logic, Metaphysics, Moral Philosophy, and the History of Philosophy. The next Competition will take place in December 1893.

1888. J. Lorrain Smith, M.A. | 1890. *C. M. Douglas, M.A.*

III.—SHAW FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1867 by Contributors to a Memorial to Sir James Shaw, Bart., a native of Ayrshire, afterwards Lord Mayor of, and M.P. for, London, and by the Association for the better endowment of the University, for the encouragement of the study of Logic, Psychology, Metaphysics, Moral Philosophy, and the History of Philosophy, is awarded after competitive examination on these subjects. It is open to Graduates in Arts of any of the four Scottish Universities, of not more than five years' standing at the time of the competition, is of the annual value of £160, 17s. 6d., and is tenable for five years. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University, and it is not open to the competition of any person who already holds a Fellowship in any English or Irish University, though the holder of the Shaw Fellowship will not be precluded from afterwards obtaining an English or Irish Fellowship. The holder is required during the fourth or fifth year of his tenure of the Fellowship to deliver in this University a Course of four Lectures on any of the subjects for the encouragement of the study of which the Fellowship was founded. The next Competition for the Fellowship will take place on 20th and 21st December 1893. (Deed of Foundation, p. 237 of CALENDAR or 1868-9.)

1888. *William Caldwell, M.A.*
Proxime accessit, J. Lorrain Smith, M.A.

IV.—GEORGE HERIOT FELLOWSHIPS.

These Fellowships are awarded by Competitive Examination among Students who have attended for not less than two years at the University, under such Rules and Regulations as may be made by the Senatus

Academicus and approved by the Governors of George Heriot's Trust. The first award may be made during the current year.

WILLIAM DICKSON TRAVELLING FUND.

This Fund (the interest of which amounts to about £100 per annum) has been established for the purpose of assisting Graduates of any Faculty, of not more than Three Years' standing, to travel, for a shorter or longer period, for purposes of study or research. Grants from the Fund may be made to holders of Scholarships, Bursaries, &c.

Applicants are required to state—"(1) The purpose for which the Applicants desire to get a Grant for travelling; (2) the total amount of expenditure thought necessary; (3) the other means they have towards meeting this expenditure; and (4) the amount of the Grant required from the Fund."

The award of a grant to be based on—"(1) The importance of the work proposed to be undertaken; (2) the sufficiency of the means proposed to be applied to the work; (3) the capability of the Applicants for the work they respectively propose to undertake."

"Holders of Grants in all cases to satisfy the Senatus by periodical reports that they are carrying out satisfactorily the work or investigation undertaken; and to present a final report, or to deliver a course of public University Lectures on their work when completed."

Applications must be lodged with the *Secretary of Senatus* on or before 15th March annually.

For Deed of Endowment, see p. 514 of CALENDAR 1889-90.

1893. A. J. Pearse, M.A.; A. B. Macaulay, M.A.; D. R. Scott, M.A.; George Henderson, M.A.; J. D. F. Gilchrist, M.A., B.Sc.

FELLOWSHIPS, SCHOLARSHIPS, UNIVERSITY PRIZES, AND BURSARIES, OPEN FOR COMPETITION IN THE FACULTY OF ARTS DURING THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1893.[1]

Fellowships.[1]

1. *Shaw Fellowship in Mental Philosophy* (III., page 279).
2. *Hamilton Fellowship in Mental Philosophy* (II., page 279).
3. *George Heriot Fellowship.* The regulations, subjects, and date of examination will be afterwards announced. (IV., page 279).

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[1] For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, see pp. 250-280, where full information regarding the conditions and values, &c., are given. The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of interest, &c.

Scholarships.[1]

4. *Drummond Mathematical Scholarship* (VIII., page 268) of £105, 12s. 6d. a year,

5. *Sir David Baxter Mathematical Scholarship* (III., page 267).

6. *John Edward Baxter Scholarship in Philosophy* (VII., page 267).

Candidates for the foregoing Fellowships and Scholarships must give their names and addresses to the *Clerk of Senatus*, *University*, *Edinburgh*, before 1st December. The Examinations will commence at ten o'clock on *Thursday*, *the* 21*st of December* 1893, and will be continued on following days, at the same hour, in the *Examination Hall* of the University.

7. *Vans Dunlop Scholarship in English Literature and Poetry* (XXVIII., page 273).

The examination will include, besides the Class Lectures, (*a*) Independent knowledge of the History of English Literature, more particularly from 1350-1688; (*b*) Special Readings :—Chaucer's *Prologue to his Canterbury Tales*, and his *Knightes Tale;* Langland's *Prologue to Piers the Plowman;* Gavin Douglas's *Palice of Honour*, and Sir David Lyndsay's *Monarchie;* Spenser's *Faery Queene*, Book i., with Dean Church's *Spenser* in the "English Men of Letters Series"; Sir Philip Sidney's *Apologie for Poetrie;* Marlowe's *Doctor Faustus;* Shakespeare's *As You Like It*, *Hamlet*, *Macbeth*, *Coriolanus*, and *Sonnets;* Ben Jonson's *Every Man in his Humour;* Milton's *Comus*, *Paradise Lost*, Books i. and ii., and *Samson Agonistes;* Dryden's *Essay of Dramatic Poesy*, and his *Indian Emperor;* Pope's *Dunciad;* Johnson's Lives of Cowley and Pope; Gray's Poems; Burns's Poems; Scott's *Lay of the Last Minstrel*, and *Lady of the Lake;* Wordsworth's *Excursion*, Books i. and ii., and his *Prose Prefaces and Notes* to his Poems; Byron's *English Bards and Scotch Reviewers*, and his *Childe Harold;* Keats's *Endymion;* Tennyson's *Idylls of the King;* Browning's *Balaustion, with a Transcript from Euripides.*

7. *Vans Dunlop Scholarship in Classical Learning* (XXIX., page 274). The examination will take place on 11th October 1893 and following days, from 9 to 12 and 2 to 5 each day.

The following are the subjects of Examination :—

Latin.

I. (i.) Plautus, *Trinummus*, *Aulularia.*
   (ii.) Horace, *Satires*, and *Ars Poetica.*

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[1] See footnote, page 280.

(iii.) Juvenal, *Satires*, i., iii., v., vii., viii., x.
(iv.) Cicero, *Pro Cluentio.*
(v.) Tacitus, *Histories*, i., ii., iii.

II. Translation from books not prescribed.

III. Latin Prose Composition.

IV. General questions on Language, Literature, and History, chiefly in connection with books prescribed.

Greek.

I. (i.) Homer, *Odyssey*, i.-xii.
(ii.) Sophocles, *Antigone*, *Philoctetes*, *Trachiniae.*
(iii.) Plato, *Protagoras*, *Lysis*, and *Enthyphro.*
(iv.) Plutarch, *Themistocles* and *Demosthenes* (Holden's Editions).

II. Translation from books not prescribed.

III. Greek Prose Composition.

IV. General questions on Language, Literature, and History, chiefly directed to test a knowledge of the books prescribed.

8. *The Vans Dunlop Scholarship in Engineering and Mechanical and Useful Arts* (XXX., page 274). The Examination is similar to that for the Second B.Sc. for the degree in Engineering, with the addition of questions on one or other of following groups of books at the option of the Candidate :—(1) Mosley's "Mechanics of Engineering;" Tredgold's "Carpentry" (revised by Tarn). (2) Fairbairn, "Mills and Millwork"; Silvanus Thompson's "Dynamo-Electric Machinery." The Examinations will take place as follows :—Natural Philosophy and Dynamics, on 7th April 1894, at 9 A.M. and 1 P.M.; on Engineering and Drawing, on 2nd, 3rd, 4th, and 5th April 1894, at 9 A.M. and 1 P.M. each day.

10. *Vans Dunlop Scholarship in Logic and Metaphysics* (XXXII., page 275). The Examination will be (as far as possible) combined with the Examination for Honours in the Department of Philosophy in *April* 1894.

11. *Bruce of Grangehill and Falkland's Classical Scholarship* (IX., page 268).

12. *Gray Scholarship* (XII., page 269).

13. *Neil Arnott Scholarship for Experimental Physics* (XXIV., page 272).

14. *Steven Scholarship in Agriculture* (XLV., page 277).

15, 16, 17. *Three Ferguson Scholarships* (XXV. - XXVII., page 272).

18. *The Mackay Smith Scholarship* (XLVI., page 278). The Examination will take place at the same time as the Examination in Natural Philosophy for M.A. with Honours (7th and 9th April 1894). Names of Candidates to be given in not later than 16th March.

Prizes.[1]

1. The *William Dickson Travelling Fund* (page 280).

2. The *Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "The influence of commerce in shaping the destinies of nations in the ancient and modern world."

The Prize is open to Students of the University, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus on or before 1st November, each Essay to be sent anonymously, distinguished by a motto, and accompanied by a sealed envelope containing the name, address, and University standing of the Candidate.

3. *Bruce of Grangehill and Falkland's Prize* (III., page 264).

4. *Neil Arnott Prize* (see *Prizes* in Faculty of Medicine).

5. *Cousin Prize in Fine Art* (VII., page 266).

6, 7, 8. *The Trustees of Gray's Prize Essay Fund* offer three Prizes—one of £20 for the first, one of £10 for the second, and one of £5 for the third best Essay on "Heredity, its influence on Man." For further information apply to the Rev. Dr Ritchie, Duns (IV., page 265).

9. *Dr Muir's Prizes* (V., page 265).

10 and 11. *Two Newton Bursaries or Prizes* one in *Mathematics*, and one in *Natural Philosophy* (LXII., pages 253 and 262).

12. *The Kelland Memorial Prize* (VIII., page 266) of about £4, 10s. will be awarded by Examination in October. The paper will be on the Higher Geometry for the Heriot Bursaries (set on Monday, 9th October, at 9 A.M.), with such additional questions as may be deemed necessary. Students who made a complete attendance on the Junior Mathematics Class for the first time in the previous Session (1892-93) will alone be eligible to compete for the prize in October next. Names to be given in not later than 22nd September.

Bursaries in Arts open October 1893.

BURSARIES.[1]

FOR STUDENTS ENTERING THE FIRST YEAR.

For Time-Table of Examinations, see pages 122 *and* 123.

For Bursary and other purposes where the phrase First-year's Student in Arts or Pure Science is not by Deed of Foundation or otherwise already defined, it shall be held to mean "A Student in Arts or Pure Science who for the first time after passing the Preliminary Examination is attending a Class or Classes qualifying for Graduation."

The Subjects of Examination for the first year Bursaries Nos. 15 to 23 inclusively in the following list are:—English, Latin, Greek, Mathematics, all on the Higher Standard, with additional papers in English,

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[1] See footnote, p. 280.

Latin, Greek, and Mathematics. The Examination Papers are denoted in the Time-Table of Examinations.

The Subjects of Examination for the Preferential Candidates for Bursaries Nos. 24 to 28 inclusively are English (as for Arts and Science Preliminary), Lower Latin, Lower Greek, and Lower Mathematics. The Examination papers are denoted in the Time-Table of Examinations.

Candidates who intend to present themselves for Examination for Bursaries Nos. 15 to 28 inclusively may obtain schedules for applications at the Matriculation Office, University (Old) Buildings, which must be completed and returned to the Clerk of Senatus *before* 22nd September. The University Authorities reserve the right to exclude Candidates who do not comply with this rule, and Preferential Bursaries for which no Candidate has entered before the above date will be thrown open to general competition, or otherwise dealt with, in terms of the Deeds of Foundation.

County Clubs, &c., which prefer this examination, may, by arranging with the University Court for the cost of Examining, avail themselves of the University Examinations for their candidates by giving due written intimation thereof at the Matriculation Office.

Candidates for Bursaries, unless they are also Candidates for the Preliminary Examination for the purpose of entering on a Course for Graduation are not required to pay any fee.

Town Council Bursaries.—Candidates for Bursaries in the gift of the Town Council, many of which are vacant, are referred to the "*City Clerk, Council Chambers*, Edinburgh," to whom early application should be made.

County Club and Private Bursaries.—Candidates for Bursaries instituted by various County Clubs are referred to the respective Secretaries of those Clubs. Information as to Private Bursaries may be obtained from the Patrons or from their Agents.

The names of the successful Candidates, and of others distinguished in the ordinary Bursary competition, will be published, in the order of merit, in the University Calendar, along with the names of the schools from which they come, provided that they have matriculated and enrolled in the necessary classes for 1893-94.

1-6. *Six George Heriot Bursaries for Boys*, each of the value of £30 a year, tenable for three years. Subjects of examination:—(1) Latin; (2) Mathematics; (3) English; (4) Greek; (5) French and German; (6) Higher Geometry. Each Candidate *must* take up subjects (1), (2), and (3), and must attain the pass standard in at least *two* of these subjects. He may, in addition, take up *two*, but *not more* than two, of subjects (4), (5), and (6). For the examination in Higher Geometry, Candidates are recommended to read Macdonald's *Higher Geometry*, Wilson's *Solid Geometry and Conic Sections*, and Casey's *Sequel to Euclid*, as partly indicating the scope of the examination in Geometry. What will be looked for is, not so much exhaustive knowledge of all the more intricate theorems, as a thorough knowledge of such as are more elementary and fundamental in their character, and ability to apply these in fairly straightforward exercises. The examination papers are denoted in the Time Table of Examinations, pages 122 and 123. Applications for Schedules for these Bursaries must be made to the *Governors of George Heriot's Trust*, at the Office of the Treasurer, 20 York Place, Edinburgh, on and after 16th August, and must be returned to him not later than 15th September. Candidates who desire to be examined in French and German, or in Higher Geometry, are required to state so in their schedule of application.

7-14. *Eight George Heriot Bursaries for Women*, each of the value of £30 a year, tenable for three years. Subjects of examination :—(1) Latin ; (2) Mathematics ; (3) English ; (4) Greek ; (5) French ; (6) German ; (7) Higher Geometry. Each Candidate must take up subjects (1), (2), and (3), and must attain the pass standard in at least *two* of these subjects. The Candidate may, in addition, take up *two*, but *not more* than two, of subjects 4-7 inclusively. The examinations are the same as for the Bursaries for boys, except that French and German *each* count as a separate subject for women. Application to be made in the manner referred to in the previous paragraph.

15. *James Fairbairn Bursary*, of the annual value of £33, 9s. 4d., tenable for four years. It cannot be held along with any other Bursary or Scholarship.

16, 17, 18. *Three University Endowment Association Bursaries*, of the annual value of £20, tenable for three years. These Bursaries cannot be held with any other Bursary in any Scottish University.

19. *One Tyndall Bruce Bursary*, of the annual value of £20 a-year, tenable for three years.

20, 21. *Two Sibbald Bursaries*, of the annual value of £30, tenable for three years. Apply to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 20th September.

22. *Thomson Bursary*, £25 a-year, tenable for four years. Apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, on or before 20th September.

23. *Mann Bursary*, of £26, 13s. 4d. a-year, tenable for three years. Candidates must be sons of residents in the town of Nairn, *i.e.*, one or other of their parents must have resided within the municipal boundaries for at least twelve months at some period prior to the competition. Should there be no qualified Candidate of the first year for this Bursary, a notice will be posted at the College gate soon after the Bursary Competition. Other Preferential Candidates must then lodge their claims within one week after the notice appears on the Board.

24, 25. *Two Grierson Bursaries*, each of the annual value of £20, tenable for four years—restricted in the first place to natives of the parishes of Crawford and Leadhills.

26. *Fotheringham and Forrest Bursary*, of the annual value of £22, 3s., tenable for four years—restricted in first place to relatives of Founder, then to such as are of the name of Forrest.

27. *One Jardine of Thorlieshope Bursary*, of the annual value of £38, 2s. 2d., and tenable for four years. Natives of the rural districts of Roxburghshire and Dumfriesshire to be preferred. The Bursars are required to attend the classes necessary for the Degree in Arts, and to take the Degree at the end of the course. In the event of there being no first year Students, the Bursary will be thrown open to competition for one year only to second, third, or fourth year Students in succession.

28. *Jamieson Bursary*, of about £26 a year, tenable for four years, open to sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any of the parishes of Crawford-john, Crawford, Lamington and Wandell, Wiston and Roberton, Culter and Biggar.

29. *Renton Bursary*, of about £18, 8s. 6d., tenable for one year, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of these classes as he may consider proper, and whose circumstances may require such assistance. The Bursary cannot be held by any one under the age of sixteen or above twenty-one. The Bursar shall cease to hold this Bursary if during the same session he shall be appointed to another Bursary of the value of £30 or upwards. The Examination is in English and Elementary Mathematics, and will take place on Saturday, November 4, at 10 o'clock. Names of Candidates to be entered at the Matriculation Office, on or before 28th October.

30. The *Donald Fraser Bursary*, of £50, for high merit in the University Class of Natural Philosophy combined with proficiency in Laboratory Work, is awarded annually at the end of the Winter Session.

31, 32. *Two Simson Bursaries*, each of the annual value of £25, tenable for three years, for Students who, having passed the Preliminary Examination, are entering on the first year of the course in Arts and are studying for the Ministry of the Church of Scotland. See definition of a First-year's Student, at page 283. The Examination will be held on 1st and 2nd November. For conditions of tenure and subjects of Examination apply to the Rev. Dr Langwill, Currie, or to the Rev. John Patrick, B.D., Greenside, Edinburgh.

33, 34. *Bursaries offered by The Edinburgh Association for the University Education of Women.*

(1) *The Earl of Zetland's Bursary*, about £20 for one year.

(2) The *Victoria Jubilee Bursary*, founded by His Excellency Dr Gunning, £40 for one year.

These Bursaries are offered to women Candidates who pass the

Edinburgh University Preliminary Examination of October 1893 with a view to graduation in Arts or Science. They cannot be held along with any other Bursary or Scholarship whatsoever, and will be awarded to such Candidates as in the opinion of the Executive Committee best fulfil the conditions of the several trusts.

Applications may be sent to the Hon. Secretary of the Association, Miss Louisa Stevenson, 13 Randolph Crescent, Edinburgh.

FOR STUDENTS ENTERING THE SECOND SESSION IN ARTS.[1]

See Time-Table of Examinations.

1. *Tyndall Bruce Bursary*, £35 a-year, for three years.

The subjects of examination are Latin, Greek, and Mathematics.

The following subjects are prescribed for the examinations in Latin and Greek :—*Latin*—Horace, *Ars Poetica ;* Vergil, *Eclogues and Georgics ;* Cicero, *Letters* (Tyrrell's selection in Macmillan's School Series) ; Latin prose composition. *Greek*—Homer, *Iliad*, xvii., xviii.; Sophocles, *Ajax* and *Electra ;* Thucydides, Bk. iii. ; Greek prose composition.

The names of Candidates must be announced at the "*Matriculation Office, University, Edinburgh*," not later than the 22nd September 1893.

2 and 3. *Two Spence Bursaries*, each of the annual value of £30 for first year and £40 for second year of tenure, open to Students who have studied in the University of Edinburgh, at the commencement of their second session in a three years' curriculum, and of their third session in a curriculum of four years. Examination in Latin, Greek, and Mathematics, to be held at Edinburgh in October. Candidates apply to Mr Henry A. Patullo, Writer, 1 Bank Street, Dundee, Factor to the Trust, for particulars.

FOR STUDENTS ENTERING THE THIRD SESSION IN ARTS.[1]

See Time-Table of Examinations.

1. *Horsliehill Scott Bursary*, of £38, 8s. 8d. a-year (under deduction of Examiners' fees), for two years.

2. *Harrison Bursary*, £33, 5s. (under deduction of Examiners' fees) for two years.

3. *Macpherson Bursary*, of £42, 18s. 8d. a-year, tenable for two years, restricted to Students who are natives of the Highlands and acquainted with Gaelic. Candidates must present evidence of Highland birth.

The subjects of examination for *Third* Session Bursaries are Classics, Mathematics, and Logic with Psychology.

The following subjects are prescribed for the examination in Classics:—
1. Tacitus, *Germania and Agricola ;* Vergil, *Georgics* ; Thucydides, Book viii.; Sophocles, *Ajax*.

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[1] See footnote, page 280.

No special books prescribed for Mathematics, or for Logic with Psychology. Candidates should revise the lectures and text-books in these classes.

The Gaelic paper set to Candidates for the Macpherson Bursary will contain a passage from MacDonald's "Birlinn of Clanranald," together with passages in prose and verse from authors not prescribed, to be translated into English ; questions in Gaelic Grammar ; and an English passage to be translated into Gaelic prose.

The names of Candidates must be announced at the "*Matriculation Office, University, Edinburgh*," not later than the 22nd September 1893.

The attention of all Bursars in the Faculty of Arts is particularly called to the following Regulation :—

"Bursars connected with the Faculty of Arts must annually attend at least two of the Classes necessary for the Degree of Master of Arts, and must present themselves at the Examinations necessary for that Degree.

"Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty of Arts, on each occasion on which he applies to the Factor for a payment."

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Arts*, after the 13th November ; also at the end of the Session in April. In applying to the Dean for the Certificate in November, Bursars must present to him their Class Cards for the Session, as evidence that they have enrolled in their classes ; and at the end of the Session they must present to him certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 18th May for the Whitsunday payments, and on and after 14th November for the Martinmas payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

G. CHRYSTAL, LL.D,
Dean of the Faculty of Arts, and
Professor of Mathematics.

Joint Board of Examiners of the Scottish Universities.

SUBJECTS OF THE PRELIMINARY EXAMINATIONS; AND EXAMINATIONS ACCEPTED AS EQUIVALENTS.

THE Joint Board have directed that the Preliminary Examination for Degrees in Arts, Science, and Medicine, for October 1893, shall be as follows :—

PRELIMINARY EXAMINATION IN ARTS AND SCIENCE.

1. English will include Grammar, Composition, Literature, History, and Geography.

(*a.*) *Grammar* will include Analysis, Parsing, Derivation, and Correction of Sentences.

(*b.*) *Composition* will include an Essay and Paraphrasing.

(*c.*) *Literature* will include a general knowledge of the life and works of the greater writers, and a more special knowledge of the works of two or three of these writers; and for next October the special subjects will be Shakespeare's "Macbeth" and "As You Like It," and Scott's "Antiquary" and "Old Mortality."

[For April and October 1894 the special subjects will be Shakespeare's "Merchant of Venice," and Scott's "Kenilworth."]

(*d.*) *Geography* will include a general knowledge of the Geography of the World, and a special knowledge of the Geography of the British Empire.

(*e.*) *History* will include a knowledge of one of the three following periods to be taken in successive years in the order herein mentioned, namely :—The Outlines of the History of both England and Scotland (*a*) from the Roman occupation to the Accession of James VI. (for October 1893); (*b*) from the Accession of James VI. to the Union of the Kingdoms (for April and October 1894); (*c*) from the Union of the Kingdoms to the Reform Bill of 1832.

Ins. II 2.

2. The *Latin* Examination on the Higher Standard will be—Translation, Prose Composition, and Grammar and Sentences.

3. The *Greek* Examination on the Higher Standard will be—Translation, Sentences, and Grammar.

The passages for Translation both from Greek and Latin will include Prose and Verse.

4. The *Latin* Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, and Grammar and Sentences.

5. The *Greek* Examination on the Lower Standard will be—Translation and Parsing, Sentences, and Grammar.

6. The paper in Mathematics on the Lower Standard will include questions on Arithmetic, Algebra, and Geometry.

Each question in Geometry will consist of two parts, of which one will be an easy deduction or illustrative exercise on the proposition set as bookwork.

7. The paper in Mathematics on the Higher Standard will include questions on Geometry, Algebra, and Trigonometry. The proportion of the paper devoted to these subjects respectively shall be, as nearly as possible, two-fifths to Geometry, two-fifths to Algebra, and one-fifth to Trigonometry.

The questions on Geometry will be constructed on the principle already laid down as to the geometrical part of the paper on the Lower Standard.

Candidates who having taken the Examination on the Higher Standard in any subject have obtained a sufficient percentage of marks, shall be held to have passed the Examination on the Lower Standard.

8. The paper on Dynamics will include elementary statics and kinetics of solids, liquids, and gases.

The questions will be directed to test the candidate's knowledge of the fundamental principles of the subjects, and will not involve algebraical or geometrical difficulties. As far as possible each question will consist of two parts, one of which will be a numerical, or other simple illustrative example of the principle with which the other part of the question deals.

9. For the Examination in French and German—

(*a.*) Two papers will be set, both in French and German; the first paper to contain a passage for translation from English into French or German, with some short sentences of an idiomatic character; the second paper will contain a set of grammatical questions, two passages for translation into English (one in Verse, one in Prose), and a selection of Literary, Philological, or Historical questions, from which the candidate will be allowed to choose *one only*.

(*b.*) An hour and a half will be allowed for the first paper, and two hours for the second.

PRELIMINARY EXAMINATION FOR DEGREES IN MEDICINE.

For the Medical Preliminary Examination in October 1893, the papers set in Latin, Greek, and Mathematics, shall be the same as those set on the Lower Standard in these subjects in the Arts Preliminary Examination.

The papers set in English, French, and German shall be of a Lower Standard than those set in these subjects in the Preliminary Examination in Arts.

It shall be in the option of any candidate for the Medical Preliminary to take the papers set on the Higher Standard for the Arts Preliminary in any of the subjects.

Excellence in one or more subjects will be permitted to compensate in some measure for deficiency in any of the other subjects. Such excellence may be shown either by attaining a high percentage of marks on the Lower Standard, or by passing on the Higher Standard.

Candidates who, having taken English, Latin, Greek, Mathematics, or a modern language, on the Higher Standard, as prescribed by the Arts Ordinance for the Arts Preliminary, have obtained a satisfactory percentage of marks, shall be held to have passed the Medical Preliminary in these subjects.

With regard to the equivalents to be recognised in the Preliminary Examinations, the Board have come to the following resolutions:—

1. The Board are prepared to accept such Certificates as may have been obtained *previous to October* 1892, as equivalent to the Preliminary Examination in Arts, Science, or Medicine, for October 1893, provided that such Certificates would have been accepted for this purpose under the Regulations in force in October 1892 at the University at which candidates holding such Certificates propose to enter.[1]

2. The Board are also prepared to accept the Leaving Certificates of the Scotch Education Department, whether obtained this year or at an earlier date, as equivalent to the Preliminary Examination in Arts, Science, or Medicine, for October 1893.

[[1] The following are the Certificates which will be accepted under this resolution as exempting from the Preliminary Examinations in Arts, Science, and Medicine, *if obtained before 1st October* 1892, viz.: — The Royal University of Ireland Matriculation Pass with Honours, and the Senior and Junior Local Examinations Certificates of Edinburgh, Glasgow, Aberdeen, St Andrews, Oxford, and Cambridge, in their respective Standards.

The following will also be accepted, *if obtained before 1st October* 1892, as exempting from the Preliminary Examination in Higher Mathematics, viz.:—The Junior Local Examinations Certificates of Oxford and Cambridge, provided that the Candidate has taken the whole Examination in Euclid, Algebra, and Trigonometry, and has not merely passed in the minimum Standard; and the Intermediate Examination of the University of London. See Footnote, p. 4, for other Examinations exempting from the Preliminary Examination for Degrees in Medicine.]

For the Preliminary Examination in Arts and Science, in October 1893, the Higher and Honours Grade Leaving Certificates in Latin, Greek, and Mathematics will be accepted as equivalent to the Higher Standard in each of these subjects, as prescribed by the Arts Ordinance; and the Lower Grade Certificate to the Lower Standard; the Higher and Honours Grade Leaving Certificate in English and Modern Languages will be accepted as equivalent to the standard prescribed for each of these subjects by the Arts Ordinance.

For the Preliminary Examination in Medicine, in October 1893, the Leaving Certificate in any Grade will be accepted in each subject as equivalent to the Preliminary Examination.

3. For the Preliminary Examinations in October 1893, and thereafter, a Degree in Arts or in Science, not being an Honorary Degree in any of the Universities of the United Kingdom, shall exempt from these Examinations in Arts or in Science, as the case may be. The corresponding regulation in reference to Medicine is given in the Medical Ordinances in these terms:—"A Degree in Arts or in Science (not being a Degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court, shall exempt from the Preliminary Examination."

4. The question of the acceptance, after October 1893, of the Leaving Certificates of the Scotch Education Department, and of the LL.A. Certificate of St Andrews, being reserved, *no Examination conducted in Scotland shall be accepted as equivalent to the Preliminary Examinations in Arts, Science, and Medicine.*

5. The Higher Certificate of the Oxford and Cambridge Schools Examinations shall be accepted as equivalent to the Higher Standard in each subject in the Preliminary Examinations in Arts and Science, and the Lower Certificate as equivalent to the Lower Standard.

6. For the Preliminary Examination in Arts and Science, the Deans of the Faculties concerned are empowered to accept, *pro tanto*, such examinations qualifying for entrance to recognised Colonial and Foreign Universities as they consider to be sufficient, but on condition that they afterwards report each case to their respective Senates, and to the Joint Board as soon as possible.

With special reference to the Preliminary Examination in Medicine in October 1893,[1] and thereafter, the Board resolved that the following

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[[1] Certificates of having passed *before 1st October* 1892 in any of the other examinations which were published in the UNIVERSITY CALENDAR of 1892-93 as exempting from the Preliminary Examination for Degrees in Medicine, will be accepted as exempting from the Preliminary Examination under the new Ordinance in October 1893, in so far as the Subjects have been passed on the Standard required by this University. Candidates who have *not passed before 1st October* 1892 in any of the Subjects at a recognised Examination must pass the whole Examination in all subjects at one and the same time.]

Examinations shall be accepted as equivalents, provided always that the Regulations of the General Medical Council regarding the registration of students of Medicine be complied with :—

Oxford.—Responsions ; Moderations.

Cambridge.—Previous Examination ; Oxford and Cambridge Schools Examinations.

London.—Matriculation Examination of the University of London.

Dublin, Trinity College.—Public Entrance Examination.

Royal University of Ireland.—Entrance Examination.

Victoria University.—The Preliminary Examination ; the Entrance Examination in Arts.

The Examinations of Indian, Colonial, and Foreign Universities and Colleges accepted by the General Medical Council will also be accepted, viz. :—

University of (1) *Calcutta*, (2) *Madras*, and (3) *Bombay.*—Entrance Examination, Certificate to include Latin.

Universities of (1) *M'Gill College, Montreal ;* (2) *Bishop's College, Montreal ;* (3) *Toronto ;* (4) *Trinity College, Toronto ;* (5) *Queen's College, Kingston ;* (6) *Victoria College, Upper Canada ;* (7) *Halifax, Nova Scotia ;* and (8) *Fredericton, New Brunswick*, Matriculation Examination.

University of Mount Allison College, New Brunswick.—Examination for a Degree in Arts.

University of King's College, Nova Scotia.—Matriculation Examination ; Responsions.

Dalhousie College and University, Halifax.—Matriculation and Sessional Examinations.

Western University of Ontario.—Entrance Examination in Medicine, Certificate to include all the subjects required for Registration.

University of Manitoba.—Previous Examination.

College of Physicians and Surgeons of Ontario.—Preliminary Examinations, Certificate to include all the subjects required for Registration.

Provincial Medical Board of Nova Scotia.—Matriculation Examination.

University of Melbourne.—Matriculation Examination.

University of Sydney.—Matriculation Examination.

University of the Cape of Good Hope.—Matriculation Examination ; Examination for a Degree in Arts.

University of Adelaide.—Matriculation Examination ; or its substitute, the Senior or Junior Public Examination, Certificate to include all the subjects required for Registration.

Codrington College (*Barbados*).—English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur."

Tasmanian Council of Education.—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

University of New Zealand.—Entrance Examination.

University of Otago.—Preliminary Examination.

Christ's College, Canterbury, New Zealand.—Voluntary Examinations, Certificate to include all the subjects required for Registration.

Ceylon Medical College. — Preliminary Examination (Primary Class).

Germany and other Continental Countries.—Gymnasial Abiturienten-Examen, and corresponding Entrance Examinations to the Universities.

M. C. TAYLOR,
Convener.

12*th June* 1893.

II.

FACULTY OF DIVINITY.

1893-94.

Dean.

PROFESSOR MALCOLM CAMPBELL TAYLOR, D.D., &c.
6 *Greenhill Park.*

Programme of Classes.

FACULTY OF DIVINITY.

Introductory Lecture by Professor Dobie, on Tuesday, 31st October, at Twelve o'clock.

Classes.	Days of Opening, and Hours of Lectures.		Professors.	Class Fees.	
Divinity............	1 Nov.,	12 o'cl.	Prof. Flint, ...	£3	3
Ecclesiastical History.	1 Nov.,	11 ,,	Prof. Taylor,....	3	3
Biblical Criticism......	1 Nov.,	10 ,,	Prof. Charteris,.	3	3
Hebrew—Junior Cl. .	1 Nov.,	1 ,,	Prof. Dobie, ...	3	3
Senior Cl. .	1 Nov.,	2 ,,	......	3	3
Arabic—Junior Class. (*Tues. & Thurs.*)	2 Nov.,	2-3 ,,	......	3	3
Arabic—Senior Class (*Tues. & Thurs.*)	2 Nov.,	3-4 ,,	......	3	3
Syriac—Junior Class. (*Mond., Wed., & Frid.*)	1 Nov.,	3-4 ,,	......	2	2

THE SUMMER PREPARATORY CLASSES IN ELEMENTARY HEBREW AND ELEMENTARY ARABIC, conducted by the Class-Assistant under the superintendence of the Professor, open on 2nd May, at 10 A.M., and 11 A.M. Fee for Hebrew, £1, 11s. 6d., and for Arabic, £2, 2s.

It is proposed that there shall be two Arabic Classes—one for Grammar and the reading of more elementary Texts at 2 o'clock P.M., to be conducted on Tuesdays and Thursdays by the Class-Assistant. The Senior Class to meet on the same days from 3-4 for the study of more advanced Texts under the Professor. Students joining the Junior Class may attend the Senior without additional Fee.

LECTURERS.

Gifford Lecturer, . . .	Professor OTTO PFLEIDERER, of Berlin University.
Gunning Lecturer, . . .	HUGH MACMILLAN, D.D., LL.D.

Class-Assistant in Hebrew and Semitic Languages, . .	JOHN WILLIAM MURRAY.
Examiners for Degree of B.D.,	THOMAS A. BICKERTON, B.D. WILLIAM HASTIE, B.D.

CURRICULUM FOR THE MINISTRY IN THE CHURCH OF SCOTLAND.

The Laws of the Church of Scotland require that every Theological Student, who desires to qualify himself for the Ministry, should attend the Class of *Divinity*, either during *three full and regular Sessions*, or during *two regular and three partial Sessions;*—and also that he should regularly attend during two Sessions each of the Classes of *Hebrew*, *Ecclesiastical History*, and *Biblical Criticism.*

Entrance Examinations.

(1.) Students, before enrolment *for the first year* of their curriculum with a view to the Ministry in the Church of Scotland, must produce to the Professor of Divinity Certificates of their having satisfactorily undergone an Examination in the subjects embraced in the *Curriculum of Arts*, and also in the Elements of Hebrew Grammar. By Act IX. of General Assembly 1872, it is ordained that this Examination shall be conducted at each of the four Scottish Universities, shortly before the commencement of every Session, by four Examining Committees, consisting of members elected by the adjoining Synods, with Conveners nominated by the General Assembly. *The Convener of the Committee for the University of Edinburgh is the Rev. John Alison, D.D., Minister of Newington.* The time of the Committee's meeting and the prescribed subjects of Examination will be timeously advertised in the *Missionary Record* of the Church of Scotland.

(2.) Students, before enrolment at the beginning of *every Session after the first* of their course in Divinity, must produce certificates of their having satisfactorily undergone the Examinations prescribed by their respective Presbyteries. For subjects of Examination prescribed by the *Presbytery of Edinburgh*, see *Appendix to Calendar.*

Discourses.

Every Student of Divinity is required during his curriculum to deliver with approbation *six* Discourses upon subjects prescribed by the Professor of Divinity, viz., a Homily, a Latin

Exegesis, a Lecture, a popular Sermon, a Hebrew Exercise on a passage of the Old Testament, and an Exercise with additions on a passage of the Greek New Testament.

The following Regulations have been made by the Faculty of Theology in regard to the delivery of these Discourses. (1.) Students of the *first* year shall give in their *Homily* to the Professor of Divinity not later than 1st February : (2.) Students of the *second* year shall give in their *Latin Exegesis* not later than the 24th December, and shall be prepared to deliver their *Lecture* not later than the 3d January; (3.) Students of the *third* year shall give in their *Hebrew Exercise* and their *Greek Exercise* with additions, not later than the 24th December, and shall be prepared to deliver their *Popular Sermon* not later than the 2d of February.

Attendance at Foreign Universities.

The General Assembly of 1868, with the consent of a majority of Presbyteries, enacted and ordained :—(1.) That all candidates for the ministry shall attend during at least *two sessions* the Theological Classes at one or more of the Universities of Scotland, and shall deliver, with approbation, the Six Trial Discourses required by the Acts of the General Assembly; and (2.) That any Student who wishes to prosecute the remainder of his Theological Curriculum at any Protestant University or Universities not within the bounds of this Church, shall, before repairing thither, undergo satisfactory examination by the Presbytery with which he is connected, and shall, moreover, satisfy the same Presbytery in regard both to the Classes which he proposes to attend, and to the proficiency he has acquired in the language used in the Foreign University in which he intends to study.

Courses in the Faculty of Divinity.

I. DIVINITY.

PROFESSOR FLINT.

The course of study in this class extends over three Sessions. The Subjects of the Lectures during 1893-94 will be :—1. General View of History of Theology. 2. Apologetics. 3. Subjective Soteriology. 4. Ecclesiology. 5. Eschatology.

Lectures will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays at 12 o'clock. Fridays will be devoted partly to the hearing of Discourses and Exercises, and partly to Lectures.

The work of the class includes two written examinations and an essay.

II. HEBREW AND SEMITIC LANGUAGES.

PROFESSOR DOBIE.

A.—HEBREW.

Junior Class—1 *to* 2.

Grammar and Exercises (Davidson's Hebrew Grammar). Translations into Hebrew Prose.

Reading and Explanation of easy Prose and Poetical Passages in the Old Testament. During Session 1893-94 the Book of Genesis and selected Psalms will be read.

Oral and Written Examinations.

In connection with this Class there is a *Tutorial Class* conducted by the Class-Assistant, which meets at an hour found most convenient for the Students, on three days weekly during the Session, and which members of the Ordinary Class may attend without additional fee.

There is also a Preparatory Class in Elementary Hebrew, which meets during the SUMMER *Session, and for which the fee is £*1, 11*s*. 6*d*.

Senior Class—2 to 3.

Grammar (Davidson or Gesenius). Müller's Hebrew Syntax. Hebrew Prose Composition.

Reading and Explanation of portions of the Historical, Poetical, and Prophetic Books of the Old Testament. During Session 1893-94, Psalms, Book iv., and the Books of Samuel and Zechariah will be read critically.

Tuesdays and Thursdays will be devoted to Hebrew Prose Composition and the Reading of non-biblical unpointed texts.

Oral and Written Examinations.

B.—ARABIC.

The Junior Class meets at 2 o'clock on Tuesdays and Thursdays, under the Class-Assistant. The Senior Class, under the Professor, on the same days, at 3 o'clock P.M. The work of the Junior Class shall consist of Instruction in Grammar and the reading of the first Sections of Arnold's *Chrestomathia Arabica*. Socin's Grammar may be used. The work of the Senior Class shall consist of Advanced Grammar and Composition, following Wright's *Arabic Grammar*, and the reading of the more difficult sections in Arnold's *Chrestomathia Arabica* and Noeldeke's *Carmina Arabici*. There is also a Preparatory Class in Elementary Arabic, which meets during the Summer Session, and for which the fee is £2, 2s.

C.—SYRIAC.

It is intended that this shall be an Elementary Class, to meet on Mondays, Wednesdays, and Fridays, at 3 o'clock, under the Professor. The work of the Class will consist of instruction in Grammar and the reading of the Texts in Nestle's *Syriac Grammar* and from the Acts of the Apostles, *Peschiṭtâ* version.

For the Regulations of the Jeffrey Scholarship in Hebrew and Oriental Languages, — value about £80, — see under "SCHOLARSHIPS IN DIVINITY."

For the Regulations of the Vans Dunlop Scholarship in "Hebrew and Oriental (Semitic) Languages,"—value about £100 annually for three years,—see under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

III. ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

1. *Lectures*—Mondays and Tuesdays.—On The Beginnings of Christianity.

2. *Lectures*—Wednesdays and Thursdays.—On The History of the Church in Scotland from 1572.

3. *Text-Book*—Fridays.—Kurtz's "History of the Christian Church." First Division; First Section.

The work of the class includes three written examinations.

For the Regulations of the Vans Dunlop Scholarship in "History,"—value about £100 annually for three years,—see under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

IV. BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PROFESSOR CHARTERIS.

The whole course is arranged to occupy three sessions, in each of which a definite portion of work on the Old and New Testaments will be taken up. The work of each session is independent of the others and can be studied separately. The first year's course is chiefly occupied with Introduction to the Pentateuch; and with Study of the Gnostic speculations relative to the Scriptures of the Old and New Testaments. The MSS. of the New Testament are also described in introduction to Textual Criticism of the New Testament. The second year's course is upon Introduction to the Poets and the Prophets of Israel; upon the relation of the Christian Scriptures to the Old Testament; with continuation of Introduction to Textual Criticism of the New Testament. *The third year's course is upon the books of the Hebrews of the period between the Old Testament and the New Testament, the Gospel of St John, the Epistle to the Galatians (the Law and the Gospel in Asia Minor), and, if time permit, the Pastoral Epistles (questions of Church order and Archæology).* Some portion of "Canonicity" is taken up each year, so as to study the early testimonies to the Christian Scriptures. If time permit, some work on Hebrew Antiquities is studied in the first year's course. There is also critical and exegetical reading of the Greek Testament each year.

The third year's course will be taken in 1893-94 (as above), with Canonicity, Parts i., ii. ix., xvi., xxii., xxiii., xxiv.

Text-Books.—"Canonicity," by the Professor; Scrivener's Introduction to Textual Criticism.

There will be written and oral examinations, in which all regular students are required to take part; and subjects of occasional voluntary essays will also be suggested.

GIFFORD LECTURES ON NATURAL THEOLOGY.

Lecturer—Professor OTTO PFLEIDERER, of Berlin University.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing, teaching, and diffusing the study of Natural Theology, in the widest sense of that term."

The Course will be delivered during the Session 1893-94.

Class Prize Lists.

WINTER SESSION, 1892-93.

I.—DIVINITY.

THIRD YEAR.

PRIZEMEN.—1. William A. Knowles, M.A.; 2. George Beale, M.A.; 3. David M. Kay, M.A.; 4. Ian R. Fraser, M.A.; 5. John O. Stafford, M.A., and John Muirhead, M.A.—equal; 7. James Wedderspoon, M.A.

HONOURABLE MENTION.—Adam W. Fergusson, M.A.; John Hunter, M.A.; James A. Robertson, M.A.

SECOND YEAR.

PRIZEMEN.—1. John Burr, M.A.; 2. James A. Dickie, M.A., and John Ritchie; (1), M.A.—equal; 4. Thomas Majoribanks, M.A., and Hotchkin H. Murray, M.A.—equal.

HONOURABLE MENTION.—John Ritchie (2), M.A.; Arthur W. K. Herdman, M.A.

FIRST YEAR.

PRIZEMEN.—1. James Croskery, M.A.; 2. William J. Pennell, M.A.; 3. Alexander R. Howell, M.A.; 4. William Smith, M.A.

R. FLINT, D.D., *Professor.*

II.—HEBREW AND ORIENTAL LANGUAGES.

SUMMER SESSION, 1892.

ELEMENTARY HEBREW CLASS.

MEDAL.—T. Grahame Bailey, M.A., Panjab, India.

FIRST-CLASS CERTIFICATES OF MERIT.—1. T. Grahame Bailey, M.A., Panjab, India; 2. David A. Hamilton, M.A., Kirkcudbright; 3. William Bell, Perthshire.

SECOND-CLASS CERTIFICATES OF MERIT.—4. John Murray, Edinburgh; 5. Robert G. Jamieson, Portobello.

D. L. ADAMS, D.D., *Professor.*

WINTER SESSION, 1892-93.

HEBREW—JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. J. Grahame Bailey, M.A., Punjaub, India (*Medallist*); 2. William J. Pennell, M.A., Fifeshire; 3. David G. Hamilton, M.A., Kirkcudbrightshire.

SECOND-CLASS CERTIFICATES OF MERIT.—4. William Smith, M.A., Kincardineshire; 5. James Cæsar, M.A., Dumfries; 6. Hugh Reid, M.A., Ayrshire; 7. Thomas S. Macpherson, M.A., Argyleshire.

HEBREW—SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. William Meston, M.A., Aberdeen; 2. John Du Plessis, Stellenbosch, South Africa (*Medallists*); 3. Robert Venters, M.A., Stirling; 4. Thomas Majoribanks, M.A., East Lothian; 5. John Ritchie, M.A., Callander, and John Burr, M.A., Forfarshire; Mr W. B. Stevenson, M.A., was first in Class Examination, but it was his second year of attendance.

SECOND-CLASS CERTIFICATES OF MERIT.—6. John M'William, M.A., Ayr; 7. H. H. Murray, M.A., Brechin; 8. John Ritchie, M.A., Edinburgh; 9. James E. Mackay, M.A., Caithness; 10. James K. Wilkin, M.A., Dumfriesshire.

ARABIC CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. W. B. Stevenson, M.A., Forfar (*Medallist*); 2. W. Meston, M.A., Aberdeen; 3. James Wedderspoon, M.A., Inverness; 4. W. Gordon Campbell, Sutherlandshire.

J. DOBIE, B.D., *Professor.*

III.—ECCLESIASTICAL HISTORY.

PRIZEMEN.—1. Duncan Cameron, M.A., Kilmonivaig (*Medallist*); 2. Ian R. Fraser, M.A., Blair-Athole; 3. William Knowles, M.A., Perth; 4. George Beale, M.A., East Lothian; 5. David M. Kay, M.A., B.Sc., Muthil, and John Muirhead, M.A., East Lothian—equal; 6. James A. Robertson, M.A., Kinclaven, and John O. Stafford, M.A., Dumfries—equal; 7. Adam W. Fergusson, M.A., Langholm.

HONOURABLE MENTION.—1. John Hunter, M.A., Edinburgh; 2. William Smith, M.A., St. Cyrus, Montrose.

M. C. TAYLOR, D.D., *Professor.*

IV.—BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PRIZEMEN.—1. William A. Knowles, M.A., (*Medallist*); 2. David M. Kay, M.A., and Duncan Cameron, M.A.—equal; 4. Ad. W. Fergusson, M.A.; 5. George Beale, M.A.; 6. John Hunter, M.A., and John Muirhead, M.A.—equal.

HONOURABLE MENTION. — John Burr, M.A.; John Ritchie, M.A., Thomas Marjoribanks, M.A.

ESSAYS.—1. W. A. Knowles, M.A.; 2. H. H. Murray, M.A., and Robert Venters, M.A.—equal.

SPECIAL EXAMINATION on "Robertson's Early Religion of Israel"—1. Ad. W. Fergusson, M.A., and David M. Kay, M.A.—equal; 3. Duncan Cameron, M.A., and J. S. Stevenson, B.A.Oxon—equal; 5. George Beale, M.A.; 6. A. J. Miller, M.A.

A. H. CHARTERIS, D.D., *Professor.*

Graduation in Divinity.

REGULATIONS FOR THE DEGREE OF BACHELOR OF DIVINITY.

APPROVED OF BY THE CHANCELLOR OF THE UNIVERSITY 17th October 1870, and 17th April 1872.

I. No one shall be admitted as a Candidate for the Degree of Bachelor of Divinity unless he be a Graduate in Arts of one of the Universities of Scotland, or of England, or of Ireland, or of a Colonial University, whose degrees shall, for this purpose, have been specially recognised by the University Court.

II. This Degree shall be conferred only after the Candidate has completed his Theological Curriculum with a view to the ministry in the Church or Denomination to which he belongs, and after he has passed a satisfactory examination in the various branches of Theology which are taught in this University.

III. Candidates who are not Masters of Arts of the University of Edinburgh must have attended two classes in one or more of the Faculties of this University.

IV. The subjects of examination for the Degree of Bachelor of Divinity shall be arranged in two departments :—The First Department embracing—(1) Hebrew, and (2) Apologetic Theology, or the Evidences of Natural and Revealed Religion ; and the Second Department embracing—(1) Ecclesiastical History, (2) Systematic Theology, and (3) Biblical Criticism and Biblical Antiquities.

V. Candidates who have completed their Theological Course may be examined in either of these departments, and may defer to some future occasion their examination in the other department, provided always that there be not a greater interval than two years between their two examinations.

VI. Students who have completed all the Sessions but one of their Theological Course may be admitted to examination in the first department.

VII. The examinations shall be conducted by the Professors of the Theological Faculty with the assistance of two Examiners, being Bachelors of Divinity of one of the Universities of Scotland, to be nominated by the University Court.

VIII. The Examination in the First Department shall take place at, or soon after, the commencement of the Theological Session ; and the Examination in the Second Department at, or soon after, the close of the Theological Session—power being reserved to the Senatus Academicus, should they see cause, to appoint the examination in both departments to take place at either of these periods.

IX. The Fee for examination shall be Three Guineas, payable in advance ; but when the examination is undergone on different occasions, a Fee of two Guineas shall be paid prior to the first, and the remaining One Guinea prior to the last examination.[1]

There will be an examination in both departments on Tuesday, 24th October 1893, and two following days ; and also on Wednesday, 4th April 1894, and two following days. (24th October and 4th April), Hebrew, 10 A.M., and Apologetics, 2 P.M. ; (25th October and 5th April), Ecclesiastical History, 10 A.M., and Divinity, 2 P.M.; (26th October and 6th April), Biblical Criticism, 10 A.M.,—three hours being allowed for each Subject. Candidates are required to communicate their names, together with evidence of their being qualified in terms of the above Regulations, to the Dean of the Faculty of Divinity, at least one week before the day appointed for the Examination, and to pay the fees[1] at the Matriculation Office on or before 19th October 1893, and on or before 20th March 1894, for the Examinations in October and April respectively.

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[1] Every Candidate must matriculate before Examination or Graduation. He is also required before Graduation to pay the Fee of £1 for Registration as a member of the General Council, which is compulsory by Act of Parliament.

The subjects of examination are as follows :—

DEPARTMENT I.

I. *Hebrew*—

- (1.) Questions in Grammar.
- (2.) Translation into Hebrew Prose.
- (3.) Books of i. and ii. Samuel.
- (4.) Psalms, Book iv.
- (5.) Zechariah and Malachi.

Critical knowledge of the text of the books prescribed is required. Jewish History, from B.C. 931-750.

II. *Apologetic Theology*—

- (1.) Pantheism.
- (2.) The Character and Teaching of Christ as testifying to the truth of Christianity.
- (3.) The Christian Evidences as connected and cumulative.

DEPARTMENT II.

I. *Ecclesiastical History*—

(1.) The Main Facts in the Development of the Constitution, Doctrine, and Worship of the Church to 381 A.D. (2.) The History of the Church in Scotland during the 17th Century.

II. *Systematic Theology*—

- (1.) The History of Christian Dogmatics from the Reformation to the close of the XVIIIth Century.
- (2.) The Doctrine of Holy Scripture.
- (3.) The Doctrines of Predestination, Creation, and Providence.

III. *Biblical Criticism and Biblical Antiquities*—

Manuscripts, Versions, and the more important Disputed Passages of the New Testament. (As in "Scrivener's Introduction," Third Edition.)

The History of Old Testament Introduction ; The History of the Canon and Text of the Old Testament, &c. (General Introduction).

Introduction to the Pauline Epistles.

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[1] When names are not entered, and fees paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, &c., lodged.

Examination Papers.

DEPARTMENT I.

I.—HEBREW.

Tuesday, 25th October 1892.—10 *to* 1 *o'clock.*

I. Translate into Hebrew :—

At first the men of the place, fearing for themselves, fled before us, but when they saw that we did not make a single prisoner or pursue any one, they gathered together and posted themselves on a large mound beside the way we were going. And they, not knowing that we were ready for war, sent to us and said, If you are peace-loving men return, but if not, we have sworn that there is not one of you but shall die. We answered, We come from afar ; we filled these wine-skins when they were new, and see, now they are old ; we cannot go back,—and dismissed the messenger. And on the morrow we struck our tents early and marched till the evening, and about sunset we pitched our tents before a wood, the wood being between us and the camp of the enemy.

II. Point and translate :—

1 ויהושע וכל ישראל ראו כי לכד הארב את העיר וכי עלה עשן העיר וישבו
2 ויכו את אנשי העי : ואלה יצאו מן העיר לקראתם ויהיו לישראל בתוך אלה
3 מזה ואלה מזה ויכו אותם עד בלתי השאיר להם שריד ופליט: ואת מלך העי
4 תפשו חי ויקרבו אתו אל יהושע : ויהי ככלות ישראל להרג את כל ישבי
העי בשדה במדבר אשר רדפום בו ויפלו כלם לפי חרב עד תמם וישבו כל
ישראל העי ויכו אתה לפי חרב :

(*a*) Of what construction is ויפלו the continuation ? Explain the syntax of חַי and parse תמם.

(*b*) Write out את (sign of acc.), with sing. and plur. pronominal suffixes.

III. Translate :—

1 וַיְהִי מִקְצֵה שְׁלֹשֶׁת יָמִים אַחֲרֵי אֲשֶׁר־כָּרְתוּ לָהֶם בְּרִית וַיִּשְׁמְעוּ כִּי־קְרֹבִים
2 הֵם אֵלָיו וּבְקִרְבּוֹ הֵם יֹשְׁבִים׃ וַיִּסְעוּ בְנֵי־יִשְׂרָאֵל וַיָּבֹאוּ אֶל־עָרֵיהֶם בַּיּוֹם
3 הַשְּׁלִישִׁי וְעָרֵיהֶם גִּבְעוֹן וְהַכְּפִירָה וּבְאֵרוֹת וְקִרְיַת יְעָרִים׃ וְלֹא הִכּוּם בְּנֵי
יִשְׂרָאֵל כִּי־נִשְׁבְּעוּ לָהֶם נְשִׂיאֵי הָעֵדָה בַּיהוָה אֱלֹהֵי יִשְׂרָאֵל וַיִּלֹּנוּ כָל־הָעֵדָה
4 עַל־הַנְּשִׂיאִים׃ וַיֹּאמְרוּ כָל־הַנְּשִׂיאִים אֶל־כָּל־הָעֵדָה אֲנַחְנוּ נִשְׁבַּעְנוּ לָהֶם
5 בַּיהוָה אֱלֹהֵי יִשְׂרָאֵל וְעַתָּה לֹא נוּכַל לִנְגֹּעַ בָּהֶם׃ זֹאת נַעֲשֶׂה לָהֶם וְהַחֲיֵה
6 אוֹתָם וְלֹא־יִהְיֶה עָלֵינוּ קֶצֶף עַל־הַשְּׁבוּעָה אֲשֶׁר־נִשְׁבַּעְנוּ לָהֶם׃ וַיֹּאמְרוּ
אֲלֵיהֶם הַנְּשִׂיאִים יִחְיוּ וַיִּהְיוּ חֹטְבֵי עֵצִים וְשֹׁאֲבֵי־מַיִם לְכָל־הָעֵדָה כַּאֲשֶׁר
7 דִּבְּרוּ לָהֶם הַנְּשִׂיאִים׃ וַיִּקְרָא לָהֶם יְהוֹשֻׁעַ וַיְדַבֵּר אֲלֵיהֶם לֵאמֹר לָמָּה רִמִּיתֶם
8 אֹתָנוּ לֵאמֹר רְחוֹקִים אֲנַחְנוּ מִכֶּם מְאֹד וְאַתֶּם בְּקִרְבֵּנוּ יֹשְׁבִים׃ וְעַתָּה
אֲרוּרִים אַתֶּם וְלֹא־יִכָּרֵת מִכֶּם עֶבֶד וְחֹטְבֵי עֵצִים וְשֹׁאֲבֵי־מַיִם לְבֵית אֱלֹהָי׃
9 וַיַּעֲנוּ אֶת־יְהוֹשֻׁעַ וַיֹּאמְרוּ כִּי הֻגֵּד הֻגַּד לַעֲבָדֶיךָ אֵת אֲשֶׁר צִוָּה יְהוָה אֱלֹהֶיךָ
אֶת־מֹשֶׁה עַבְדּוֹ לָתֵת לָכֶם אֶת־כָּל־הָאָרֶץ וּלְהַשְׁמִיד אֶת־כָּל־יֹשְׁבֵי הָאָרֶץ
מִפְּנֵיכֶם וַנִּירָא מְאֹד לְנַפְשֹׁתֵינוּ מִפְּנֵיכֶם וַנַּעֲשֵׂה אֶת־הַדָּבָר הַזֶּה׃

(*a*) Remark on the punctuation of מקצה (v. 1) and ויסעו (v. 2), and analyse and parse both.

(*b*) Specify the peculiarity in הכפירה (v. 2) and הַחֵצִין (Josh. viii. 33), and explain it for each.

(*c*) Parse וילנו (v. 3). What is noteworthy about the use of this verb? Which of its parts need to be distinguished from similar forms of another root, and how is this done?

(*d*) Explain the closed syllable in לנגע (v. 4). What is peculiar in this word? Write the regular form.

(*e*) Parse החיה (v. 5) and explain the construction. Parse נעשׂה (v. 5) and write the corresponding form of קטל.

(*f*) יחיו ויהיו (v. 6) is rendered by the LXX. ζήσονται καὶ ἔσονται κ.τ.λ. How did they arrive at this rendering?

(*g*) Remark on ונעיטה (v. 9) and explain את before אשר (v. 9).

(*h*) What is a circumstantial sentence? Is there any example of one in the above passage?

IV. Translate :—

1, 2 מַה־יְּדִידוֹת מִשְׁכְּנוֹתֶיךָ יְהוָה צְבָאוֹת׃ נִכְסְפָה וְגַם־כָּלְתָה ׀ נַפְשִׁי לְחַצְרוֹת
3 יְהוָה לִבִּי וּבְשָׂרִי יְרַנְּנוּ אֶל־אֵל חָי׃ גַּם־צִפּוֹר ׀ מָצְאָה בַיִת וּדְרוֹר ׀ קֵן לָהּ
4 אֲשֶׁר־שָׁתָה אֶפְרֹחֶיהָ אֶת־מִזְבְּחוֹתֶיךָ יְהוָה צְבָאוֹת מַלְכִּי וֵאלֹהָי׃ אַשְׁרֵי
5 יוֹשְׁבֵי בֵיתֶךָ עוֹד יְהַלְלוּךָ סֶּלָה׃ אַשְׁרֵי אָדָם עוֹז־לוֹ בָךְ מְסִלּוֹת בִּלְבָבָם׃
6, 7 עֹבְרֵי ׀ בְּעֵמֶק הַבָּכָא מַעְיָן יְשִׁיתוּהוּ גַּם־בְּרָכוֹת יַעְטֶה מוֹרֶה׃ יֵלְכוּ מֵחַיִל
8 אֶל־חָיִל יֵרָאֶה אֶל־אֱלֹהִים בְּצִיּוֹן׃ יְהוָה אֱלֹהִים צְבָאוֹת שִׁמְעָה תְפִלָּתִי
9, 10 הַאֲזִינָה אֱלֹהֵי יַעֲקֹב סֶלָה׃ מָגִנֵּנוּ רְאֵה אֱלֹהִים וְהַבֵּט פְּנֵי מְשִׁיחֶךָ׃ כִּי
טוֹב־יוֹם בַּחֲצֵרֶיךָ מֵאָלֶף בָּחַרְתִּי הִסְתּוֹפֵף בְּבֵית אֱלֹהַי מִדּוּר בְּאָהֳלֵי־רֶשַׁע׃
11 כִּי שֶׁמֶשׁ ׀ וּמָגֵן יְהוָה אֱלֹהִים חֵן וְכָבוֹד יִתֵּן יְהוָה לֹא יִמְנַע־טוֹב לַהֹלְכִים
12 בְּתָמִים׃ יְהוָה צְבָאוֹת אַשְׁרֵי אָדָם בֹּטֵחַ בָּךְ׃

(*a*) Which clause of verse 3 is regarded by some as not part of the original text? In what ways may את־מזבחותיך be construed and translated in connection with the present text? What reasons are there for supposing a lacuna before these words? How has it been supplied?

(*b*) מסלות בלבבם (v. 5). How does Cheyne, following Bickell, emend the text here? What other emendation has been suggested?

(*c*) What is the syntactical relation of the clause עברי בעמק הבכא (v. 6) in the sentence? Remark on a peculiarity in the syntax of the clause itself.

(*d*) Parse יעטה (v. 6) and explain the idiom of the sentence 6*b*.

(*e*) How has the Authorised Version arrived at this rendering of 6*b*: "The rain also filleth (covereth) the pools"? Remark on מורה.

(*f*) Parse and remark on יראה (v. 7). Explain the LXX. rendering of the clause *ὀφθήσεται ὁ θεὸς τῶν θεῶν ἐν Σιών*.

(*g*) Remark on and explain the origin of the peculiarity in **יהוה אלהים צבאות** (v. 8).

(*h*) Give another construction and translation of 9*a*.

(*i*) Where and why has the text of verse 10 been regarded as corrupt? What emendations have been proposed? What other suggestion has been made with regard to this entire verse?

(*k*) What verses have by some been rejected entirely, and for what reason?

V. Translate :—

1 בַּקְּשׁוּ אֶת־יְהוָה כָּל־עַנְוֵי הָאָרֶץ אֲשֶׁר מִשְׁפָּטוֹ פָּעָלוּ בַּקְּשׁוּ־צֶדֶק בַּקְּשׁוּ
2 עֲנָוָה אוּלַי תִּסָּתְרוּ בְּיוֹם אַף יְהוָה׃ כִּי עַזָּה עֲזוּבָה תִהְיֶה וְאַשְׁקְלוֹן לִשְׁמָמָה
3 אַשְׁדּוֹד בַּצָּהֳרַיִם יְגָרְשׁוּהָ וְעֶקְרוֹן תֵּעָקֵר׃ הוֹי יֹשְׁבֵי חֶבֶל הַיָּם גּוֹי
כְּרֵתִים דְּבַר־יְהוָה עֲלֵיכֶם כְּנַעַן אֶרֶץ פְּלִשְׁתִּים וְהַאֲבַדְתִּיךְ מֵאֵין יוֹשֵׁב׃
4, 5 וְהָיְתָה חֶבֶל הַיָּם נְוֹת כְּרֹת רֹעִים וְגִדְרוֹת צֹאן׃ וְהָיָה חֶבֶל לִשְׁאֵרִית בֵּית
יְהוּדָה עֲלֵיהֶם יִרְעוּן בְּבָתֵּי אַשְׁקְלוֹן בָּעֶרֶב יִרְבָּצוּן כִּי יִפְקְדֵם יְהוָה אֱלֹהֵיהֶם
6 וְשָׁב שְׁבוּתָם׃ שָׁמַעְתִּי חֶרְפַּת מוֹאָב וְגִדֻּפֵי בְּנֵי עַמּוֹן אֲשֶׁר חֵרְפוּ אֶת־עַמִּי
וַיַּגְדִּילוּ עַל־גְּבוּלָם׃

(*a*) In verse 1, for אשר----פעלו, LXX. reads *κρίμα ἐργάζεσθε*. What change does this involve in the Hebrew text?

(*b*) Remark on צהרים (v. 2), explain the usage in יגרשוה (v. 2), and write the Hebrew corresponding to its LXX. rendering, *ἐκριφήσεται*. Why are the verbs feminine in verse 2?

(*c*) What is the more usual phrase for חבל הים (v. 3)? For גוי כרתים (v. 3) LXX. has *πάροικοι* Κρητῶν, and Jerome has *gens perditorum*. How did they come to these renderings?

(*d*) Remark on היתה חבל (v. 4). What is the usual form for נות (v. 4)? What meanings have been suggested for כרת (v. 4)?

(*e*) Remark on חבל (v. 5). Give two translations of the first three words of verse 5.

(*f*) To what does the suffix in עליהם (v. 5) refer? What other punctuation has been suggested for ירבצון (v. 5) and why?

(*g*) Point the Keri and Kethibh of the last word of verse 5, and remark on LXX. rendering of חרפת (v. 6) by *ὀνειδισμούς*.

VI. Translate :—

1, 2 כֹּה אָמַר יְהוָֹה צְבָאוֹת שְׁאַל־נָא אֶת־הַכֹּהֲנִים תּוֹרָה לֵאמֹר׃ הֵן ׀
יִשָּׂא־אִישׁ בְּשַׂר־קֹדֶשׁ בִּכְנַף בִּגְדוֹ וְנָגַע בִּכְנָפוֹ אֶל־הַלֶּחֶם וְאֶל־הַנָּזִיד
וְאֶל־הַיַּיִן וְאֶל־שֶׁמֶן וְאֶל־כָּל־מַאֲכָל הֲיִקְדָּשׁ וַיַּעֲנוּ הַכֹּהֲנִים וַיֹּאמְרוּ לֹא׃
3 וַיֹּאמֶר חַגַּי אִם־יִגַּע טְמֵא־נֶפֶשׁ בְּכָל־אֵלֶּה הֲיִטְמָא וַיַּעֲנוּ הַכֹּהֲנִים וַיֹּאמְרוּ
4 יִטְמָא׃ וַיַּעַן חַגַּי וַיֹּאמֶר כֵּן הָעָם־הַזֶּה וְכֵן־הַגּוֹי הַזֶּה לְפָנַי נְאֻם־יְהוָֹה וְכֵן
5 כָּל־מַעֲשֵׂה יְדֵיהֶם וַאֲשֶׁר יַקְרִיבוּ שָׁם טָמֵא הוּא׃ וְעַתָּה שִׂימוּ־נָא לְבַבְכֶם
6 מִן־הַיּוֹם הַזֶּה וָמָעְלָה מִטֶּרֶם שׂוּם־אֶבֶן אֶל־אֶבֶן בְּהֵיכַל יְהוָֹה׃ מִהְיוֹתָם
בָּא אֶל־עֲרֵמַת עֶשְׂרִים וְהָיְתָה עֲשָׂרָה בָּא אֶל־הַיֶּקֶב לַחְשֹׂף חֲמִשִּׁים פּוּרָה
7 וְהָיְתָה עֶשְׂרִים׃ הִכֵּיתִי אֶתְכֶם בַּשִּׁדָּפוֹן וּבַיֵּרָקוֹן וּבַבָּרָד אֵת כָּל־מַעֲשֵׂה
8 יְדֵיכֶם וְאֵין־אֶתְכֶם אֵלַי נְאֻם־יְהוָֹה׃ שִׂימוּ־נָא לְבַבְכֶם מִן־הַיּוֹם הַזֶּה וָמָעְלָה
מִיּוֹם עֶשְׂרִים וְאַרְבָּעָה לַתְּשִׁיעִי לְמִן־הַיּוֹם אֲשֶׁר־יֻסַּד הֵיכַל־יְהוָֹה שִׂימוּ
9 לְבַבְכֶם׃ הַעוֹד הַזֶּרַע בַּמְּגוּרָה וְעַד־הַגֶּפֶן וְהַתְּאֵנָה וְהָרִמּוֹן וְעֵץ הַזַּיִת לֹא
נָשָׂא מִן־הַיּוֹם הַזֶּה אֲבָרֵךְ׃

(*a*) Remark on הן (v. 2), and on the use of the article in הלחם, etc. (v. 2).

(*b*) What two explanations are given of the phrase טמא נפש (v. 3)?

(*c*) To what does the suffix in מהיותם (v. 6) refer? Note the idiom in בא and explain היתה (v. 6). Explain the construction of פורה (v. 6). Note and remark on any other peculiarity in this verse.

(*d*) In what relation does את כל־מעשה (v. 7) stand to the verb of the sentence? Change the construction slightly so as to make the relation clear.

(*e*) What is abnormal in אין־אתכם (v. 7)? Give the usual construction and complete the clause on these lines, supplying what is omitted in the text. How did the Vulgate reading, *et non fuit in vobis*, etc., arise?

(*f*) Does מעלה mean the same thing in verses 5 and 8?

(*g*) Translate ועד----אברך in another way.

Wednesday, *March* 22, 1893.

I. Translate into Hebrew:—

The people was as numerous as the inhabitants of the land of which Yahweh had said, It is not theirs. I give it to my people that they may possess it and dwell therein. Nevertheless they had not entered on its possession, although they had waged war with its possessors many years, and men began to inquire what was to be done. There arose an old man, one of those who had seen all that had befallen the people since the day when they entered the land, and he said, This is from Yahweh, besides Whom there is no God. Give Him the glory. He hath spoken but ye have not believed, He hath commanded but ye have not obeyed; because ye have forgotten Him, He also hath forgotten you. But the people cried out with one accord, Whoever heard such things? What have we to do with thee?

II. Point:—

1 ויאמרו אלינו זקינינו וכל־ישבי ארצנו לאמר קחו בידכם צידה לדרך
2 ולכו לקראתם ואמרתם אליהם עבדיכם אנחנו ועתה כרתו־לנו ברית: זה
לחמנו חם הצטידנו אתו מבתינו ביום צאתנו ללכת אליכם ועתה הנה יבש
3 והיה נקדים: ואלה נאדות היין אשר מלאנו חדשים והנה התבקעו ואלה
שלמותינו ונעלינו בלו מרב הדרך מאד:

(*a*) Give alternative explanations of the construction זה לחמנו (v. 2).

(*b*) How is חם (v. 2) to be construed? Point out another instance of this construction in these verses.

III. Translate:—

1 וַיֻּגַּד לִיהוֹשֻׁעַ לֵאמֹר נִמְצְאוּ חֲמֵשֶׁת הַמְּלָכִים נֶחְבָּאִים בַּמְּעָרָה בְּמַקֵּדָה:
2 וַיֹּאמֶר יְהוֹשֻׁעַ גֹּלּוּ אֲבָנִים גְּדֹלוֹת אֶל־פִּי הַמְּעָרָה וְהַפְקִידוּ עָלֶיהָ אֲנָשִׁים
3 לְשָׁמְרָם: וְאַתֶּם אַל־תַּעֲמֹדוּ רִדְפוּ אַחֲרֵי אֹיְבֵיכֶם וְזִנַּבְתֶּם אוֹתָם אַל־תִּתְּנוּם
4 לָבוֹא אֶל־עָרֵיהֶם כִּי נְתָנָם יְהוָה אֱלֹהֵיכֶם בְּיֶדְכֶם: וַיְהִי כְּכַלּוֹת יְהוֹשֻׁעַ וּבְנֵי
יִשְׂרָאֵל לְהַכֹּתָם מַכָּה גְדֹלָה־מְאֹד עַד־תֻּמָּם וְהַשְּׂרִידִים שָׂרְדוּ מֵהֶם וַיָּבֹאוּ
5 אֶל־עָרֵי הַמִּבְצָר: וַיָּשֻׁבוּ כָל־הָעָם אֶל־הַמַּחֲנֶה אֶל־יְהוֹשֻׁעַ מַקֵּדָה בְּשָׁלוֹם
6 לֹא־חָרַץ לִבְנֵי יִשְׂרָאֵל לְאִישׁ אֶת־לְשֹׁנוֹ: וַיֹּאמֶר יְהוֹשֻׁעַ פִּתְחוּ אֶת־פִּי
7 הַמְּעָרָה וְהוֹצִיאוּ אֵלַי אֶת־חֲמֵשֶׁת הַמְּלָכִים הָאֵלֶּה מִן־הַמְּעָרָה: וַיְהִי
כְּהוֹצִיאָם אֶת־הַמְּלָכִים הָאֵלֶּה אֶל־יְהוֹשֻׁעַ וַיִּקְרָא יְהוֹשֻׁעַ אֶל־כָּל־אִישׁ יִשְׂרָאֵל
וַיֹּאמֶר אֶל־קְצִינֵי אַנְשֵׁי הַמִּלְחָמָה הֶהָלְכוּא אִתּוֹ קִרְבוּ שִׂמוּ אֶת־רַגְלֵיכֶם
8 עַל־צַוְּארֵי הַמְּלָכִים הָאֵלֶּה וַיִּקְרְבוּ וַיָּשִׂימוּ אֶת־רַגְלֵיהֶם עַל־צַוְּארֵיהֶם: וַיֹּאמֶר
אֲלֵיהֶם יְהוֹשֻׁעַ אַל־תִּירְאוּ וְאַל־תֵּחָתּוּ חִזְקוּ וְאִמְצוּ כִּי כָכָה יַעֲשֶׂה יְהוָה
לְכָל־אֹיְבֵיכֶם אֲשֶׁר אַתֶּם נִלְחָמִים אוֹתָם:

(*a*) Remark on נחבאים (v. 1) and ההלכוא (v. 7).

(*b*) Is the text 5 b. satisfactory?

IV. Translate:—

1, 2 יְהוָֹה אֱלֹהֵי יְשׁוּעָתִי יוֹם צָעַקְתִּי בַלַּיְלָה נֶגְדֶּךָ׃ תָּבוֹא לְפָנֶיךָ תְּפִלָּתִי
3, 4 הַטֵּה אָזְנְךָ לְרִנָּתִי׃ כִּי־שָׂבְעָה בְרָעוֹת נַפְשִׁי וְחַיַּי לִשְׁאוֹל הִגִּיעוּ׃ נֶחְשַׁבְתִּי
5 עִם־יוֹרְדֵי בוֹר הָיִיתִי כְּגֶבֶר אֵין־אֱיָל׃ בַּמֵּתִים חָפְשִׁי כְּמוֹ חֲלָלִים שֹׁכְבֵי
6 קֶבֶר אֲשֶׁר לֹא זְכַרְתָּם עוֹד וְהֵמָּה מִיָּדְךָ נִגְזָרוּ׃ שַׁתַּנִי בְּבוֹר תַּחְתִּיּוֹת
7, 8 בְּמַחֲשַׁכִּים בִּמְצֹלוֹת׃ עָלַי סָמְכָה חֲמָתֶךָ וְכָל־מִשְׁבָּרֶיךָ עִנִּיתָ סֶּלָה׃ הִרְחַקְתָּ
9 מְיֻדָּעַי מִמֶּנִּי שַׁתַּנִי תוֹעֵבוֹת לָמוֹ כָּלֻא וְלֹא אֵצֵא׃ עָנִי אֲנִי וְגֹוֵעַ מִנֹּעַר נָשָׂאתִי
10, 11 אֵמֶיךָ אָפוּנָה׃ עָלַי עָבְרוּ חֲרוֹנֶיךָ בִּעוּתֶיךָ צִמְּתֻתוּנִי׃ סַבּוּנִי כַמַּיִם כָּל־הַיּוֹם
12 הִקִּיפוּ עָלַי יָחַד׃ הִרְחַקְתָּ מִמֶּנִּי אֹהֵב וָרֵעַ מְיֻדָּעַי מַחְשָׁךְ׃

(*a*) What is the traditional translation of verse 1? Why is it wrong? Give a possible translation of the text as it stands.

(*b*) Point the following emendation so far as it differs, and translate
יהוה אלהי שועתי יומם צעקתי בלילה נגדך

(*c*) Remark on שבע ברעות (v. 3), נחשבתי עם (v. 4), שכבי קבר (v. 5).

(*d*) What kind of a sentence is "והמה וג (v. 5), and what is its function? How is אין איל (v. 4) related to גבר, and what is its ultimate grammatical nature?

(*e*) What meanings have been given to חפשי (v. 5)? Read instead נפשי, and translate the clause. What is the force of נפשי in such a connection?

(*f*) Mention the chief renderings of ענית (v. 7). In what ways is it possible to construe it?

(*g*) Translate verse 7 b., reading instead of ענית (1) צִוִּיתָ, (2) אִנִּיתָ, (3) עֻנֵּיתִי.

(*h*) In what ways may the clause כלא ולא אצא be regarded as related to verse 8?

(*i*) Remark on אפונה (v. 9). How is this reading generally emended? What question of grammar is connected with it?

(*j*) What is anomalous in the form צִמְּתוּתֻנִי (v. 10)? How has the form been explained? What emendations have been suggested?

(*k*) Point 12 b. so as to give something like the reading of Jerome and Syr. *notos meos abstulisti.* Translate מְיֻדָּעַי מַחְשָׁךְ and מְיֻדָּעַי מַחְשָׁךְ וְקֶבֶר, and state the reason for each of these emendations.

(*l*) How did the following LXX. variants arise ἐν σκιᾷ θανάτου (במצלות v. 6), ἀπὸ ταλαιπωρίας (מחשך v. 12)?

(*m*) Note shortly any peculiarities in איל (v. 4), מצלות (v. 6), נער (v. 9), חרוניך (v. 10).

V. Translate:—

1, 2 הוֹי מוֹרְאָה וְנִגְאָלָה הָעִיר הַיּוֹנָה׃ לֹא שָׁמְעָה בְּקוֹל לֹא לָקְחָה מוּסָר

3 בַּיהוָה לֹא בָטָחָה אֶל־אֱלֹהֶיהָ לֹא קָרֵבָה׃ שָׂרֶיהָ בְקִרְבָּהּ אֲרָיוֹת שֹׁאֲגִים

4 שֹׁפְטֶיהָ זְאֵבֵי עֶרֶב לֹא גָרְמוּ לַבֹּקֶר׃ נְבִיאֶיהָ פּוֹחֲזִים אַנְשֵׁי בֹּגְדוֹת כֹּהֲנֶיהָ

5 חִלְּלוּ־קֹדֶשׁ חָמְסוּ תּוֹרָה׃ יְהוָה צַדִּיק בְּקִרְבָּהּ לֹא יַעֲשֶׂה עוֹלָה בַּבֹּקֶר בַּבֹּקֶר

6 מִשְׁפָּטוֹ יִתֵּן לָאוֹר לֹא נֶעְדָּר וְלֹא־יוֹדֵעַ עַוָּל בֹּשֶׁת׃ הִכְרַתִּי גוֹיִם נָשַׁמּוּ
פִּנּוֹתָם הֶחֱרַבְתִּי חוּצוֹתָם מִבְּלִי עוֹבֵר נִצְדּוּ עָרֵיהֶם מִבְּלִי־אִישׁ מֵאֵין יוֹשֵׁב׃

7 אָמַרְתִּי אַךְ־תִּירְאִי אוֹתִי תִּקְחִי מוּסָר וְלֹא־יִכָּרֵת מְעוֹנָהּ כֹּל אֲשֶׁר־פָּקַדְתִּי

8 עָלֶיהָ אָכֵן הִשְׁכִּימוּ הִשְׁחִיתוּ כֹּל עֲלִילוֹתָם׃ לָכֵן חַכּוּ־לִי נְאֻם־יְהוָה לְיוֹם קוּמִי
לְעַד כִּי מִשְׁפָּטִי לֶאֱסֹף גּוֹיִם לְקָבְצִי מַמְלָכוֹת לִשְׁפֹּךְ עֲלֵיהֶם זַעְמִי כֹּל חֲרוֹן

9 אַפִּי כִּי בְּאֵשׁ קִנְאָתִי תֵּאָכֵל כָּל־הָאָרֶץ׃ כִּי־אָז אֶהְפֹּךְ אֶל־עַמִּים שָׂפָה
בְרוּרָה לִקְרֹא כֻלָּם בְּשֵׁם יְהוָה לְעָבְדוֹ שְׁכֶם אֶחָד׃

(*a*) What objections are there to your rendering of verse 1? State another translation and the objections to it.

(*b*) Remark on the orthography of נגאלה and מראה (v. 1), and write the regular fem. participle of verbs ל״ה, ל״א.

(*c*) How has LXX. rendered verse 1 *ὦ ἡ ἐπιφανὴς καὶ ἀπολελυτρωμένη πόλις ἡ περιστερά*? Explain how Symmachus has *ἀνόητος* = יונה.

(*d*) Remark on בקול (v. 2). Give the more usual form of the phrase אנשי בגדות (v. 4). Point בגדות in another way. How did LXX. get *λύκοι τῆς Ἀραβίας* = זאבי ערב (v. 3).

(*e*) What do you know about the use of גרם (v. 3), in general, and especially about the form in the text? Give its traditional meaning according to the older versions, and say what other meaning is proposed for it.

(*f*) What is the subject of לא נעדר (v. 5)?

(*g*) How would the text and reference of verse 6 be affected by the adoption of LXX. *ὑπερηφάνους* for גוים?

(*h*) Remark on נצדו (v. 6), and explain the figure שכם אחד (v. 9).

(*i*) Write the Hebrew for LXX. *ἐξ ὀφθαλμῶν αὐτῆς* for מעונה (v. 7), and translate the clause accordingly.

(*j*) Give another translation of כל אשר......עליה (v. 7). Distinguish לְעֵד, לָעַד and לְעַד.

(*k*) Shew how you get your translation of 9 a, and point and translate אהפך כל עמים משפחה ברורה.

VI. Translate:

1 כֹּה אָמַר יְהוָֹה צְבָאוֹת לֵאמֹר הָעָם הַזֶּה אָמְרוּ לֹא עֶת־בֹּא עֶת־בֵּית יְהוָֹה
2, 3 לְהִבָּנוֹת׃ וַיְהִי דְּבַר־יְהוָֹה בְּיַד־חַגַּי הַנָּבִיא לֵאמֹר׃ הַעֵת לָכֶם אַתֶּם לָשֶׁבֶת
4 בְּבָתֵּיכֶם סְפוּנִים וְהַבַּיִת הַזֶּה חָרֵב׃ וְעַתָּה כֹּה אָמַר יְהוָֹה צְבָאוֹת שִׂימוּ
5 לְבַבְכֶם עַל־דַּרְכֵיכֶם׃ זְרַעְתֶּם הַרְבֵּה וְהָבֵא מְעָט אָכוֹל וְאֵין־לְשָׂבְעָה שָׁתוֹ
6 וְאֵין־לְשָׁכְרָה לָבוֹשׁ וְאֵין־לְחֹם לוֹ וְהַמִּשְׂתַּכֵּר מִשְׂתַּכֵּר אֶל־צְרוֹר נָקוּב׃ כֹּה

7 אָמַר יְהוָה צְבָאוֹת שִׂימוּ לְבַבְכֶם עַל־דַּרְכֵיכֶם : עֲלוּ הָהָר וַהֲבֵאתֶם עֵץ וּבְנוּ
8 הַבָּיִת וְאֶרְצֶה־בּוֹ וְאֶכָּבְדָ אָמַר יְהוָה : פָּנֹה אֶל־הַרְבֵּה וְהִנֵּה־לִמְעָט וַהֲבֵאתֶם
הַבַּיִת וְנָפַחְתִּי בוֹ יַעַן מֶה נְאֻם יְהוָה צְבָאוֹת יַעַן בֵּיתִי אֲשֶׁר הוּא חָרֵב וְאַתֶּם
9 רָצִים אִישׁ לְבֵיתוֹ : עַל־כֵּן עֲלֵיכֶם כָּלְאוּ שָׁמַיִם מִטָּל וְהָאָרֶץ כָּלְאָה יְבוּלָהּ :
10 וָאֶקְרָא חֹרֶב עַל־הָאָרֶץ וְעַל־הֶהָרִים וְעַל־הַדָּגָן וְעַל־הַתִּירוֹשׁ וְעַל־הַיִּצְהָר וְעַל
אֲשֶׁר תּוֹצִיא הָאֲדָמָה וְעַל־הָאָדָם וְעַל־הַבְּהֵמָה וְעַל כָּל־יְגִיעַ כַּפָּיִם :

(*a*) Construe and render in two different ways the Massoretic text of 1 b. What change in the pointing would yield better sense?

(*b*) Note the apparent syntactical peculiarity in ספונים (v. 3), and state in what ways it has been explained. Remark also on the function and syntax of אתם (v. 3).

(*c*) Write out the ordinary construction for שתו, אכול, והבא, and לבוש (v. 5).

(*d*) Give the different meanings of the phrase אין ל, translating אין לשבעה (v. 5) accordingly. Parse שבעה, and tell when this form is used.

(*e*) Parse לְחֹם (v. 5). How does this pointing depart from the usual practice? To what does לוֹ refer, and how comes it to be used here? Remark on the construction המשתכר משתכר (v. 5).

(*f*) Translate וארצה בו ואכבד (v. 7) according to Kethibh, and according to Qeri. Explain והבאתם (v. 7).

(*g*) Does the form והבאתם (v. 8) differ from that in verse 7, and if so, what is the difference?

(*h*) What probability is there of עליכם (v. 9) being an error of transcription? How is מטל explained? Say how LXX. have ῥομφαίαν for חרב, whether either reading entirely suits the context, and which is on the whole better.

II.—APOLOGETIC THEOLOGY.

Tuesday, October 25, 1892.—2 *to* 5 *o'clock.*

THEISM AND PANTHEISM.

1. State the distinctive characteristics of Pantheism in a short series of propositions, and show how they differentiate it from Theism.
2. Indicate how the pantheistic conception of God naturally affects religious life and theological doctrine.
3. Show, under reference to their works, how the early Christian Apologists dealt with the Theism and Pantheism of their time.
4. State and examine any of the modern speculative attempts made to reconcile Theism and Pantheism.

THE CHARACTER AND TEACHING OF CHRIST.

1. State the chief objections which have been urged against the perfection of Christ's character and teaching.
2. Indicate what answers have been given to these objections.
3. Examine in what respects the argument from the character and teaching of Christ to the truth of Christianity has been affected by the criticism of the Gospel History during the present century.
4. Consider whether and how far the same argument has been affected by recent investigation and discussion of the character and teaching of (1) Buddha, (2) Mohammed. State concisely what you regard as distinctive of and peculiar to the Christian argument.

THE CHRISTIAN EVIDENCES AS CONNECTED AND CUMULATIVE.

1. On what grounds is it desirable to insist on the connected and cumulative nature of the Christian evidences?
2. Give an account of what has been written regarding the connected and cumulative nature of the Christian evidences by Bishop Butler or any other eminent Christian Apologist.
3. Show how the arguments from Miracles, Prophecy, the Person of Christ, and the Christian self-consciousness are interconnected and cumulative, and how far they are independent of each other.
4. Examine the value of the connected and cumulative argument for Christianity from the following point of view: "The Scripture-arguments are arguments of inducement addressed to the whole nature of man."

Wednesday, March 22, 1893.—2 *to* 5 *o'clock.*

THEISM AND PANTHEISM.

1. How may Immanent Theism be distinguished from Pantheism?
2. May the universe be reasonably regarded as itself personal, intelligent, and moral? If not, why not?

3. State and criticise the form of Pantheism exhibited in the Upanishads and the Vedanta-Sara. Refer to any recent European revival and advocacy of this system.

4. Distinguish between Speculative and Empirical Theism; mention leading expounders of the latter in the nineteenth century; and shew how, and how far, they have refuted Pantheism and established Theism on a scientific basis.

THE CHARACTER AND TEACHING OF CHRIST.

1. State the chief reasons for belief in the sinlessness of Jesus.

2. What are the chief characteristics of Christ's teaching from which the truth of Christianity may be inferred?

3. Compare the character and teaching of Christ apologetically with the character and teaching of (1) Socrates, (2) Apollonius of Tyana, (3) Sakya-muni.

4. Review the representations of the character of Christ given by (1) Schleiermacher *or* Strauss, (2) Rousseau *or* Renan, (3) F. W. Newman *or* Bushnell.

THE CHRISTIAN EVIDENCES AS CONNECTED AND CUMULATIVE.

1. Indicate generally how far Mosaism and Prophetism give support to Christianity.

2. Indicate how the historical and moral evidences of Christianity are related.

3. Show how the natural incredibility of Miracles when viewed by themselves may be affected or removed by other evidences being brought into connection with them.

4. Discuss the logical value of cumulative probable evidence in arguing for supernatural truth. Has Christianity any higher, demonstrative or absolute, evidence to found upon?

DEPARTMENT II.

I.—ECCLESIASTICAL HISTORY.

Wednesday, October 26, 1892.—10 *to* 1 *o'clock.*

1. Indicate the various sources available for ascertaining the main facts in the development of the constitution, doctrine, and worship of the Church to 381 A.D., classifying them critically and describing them generally according to their relative value and importance.

2. Trace the rise and development of the Episcopate by reference to the writings of Ignatius, Irenæus, and Cyprian. Indicate the present position of the question.

3. State and examine the alleged grounds on which the claim of the Roman See to a Universal Primacy is based. Account historically for the actual Supremacy of the Roman Church in the West.

4. Write notes on the following:—(1) Ordines Minores, (2) The Four Stages of Penitential Discipline, (3) The Schism of Novatian, (4) χειροτονία.

5. Show how the Catholic Doctrine was developed in conflict with particular heresies. Illustrate this relation by reference to the so-called Apostles' Creed.

6. Give an account of the Life and Writings of Origen, *or* Athanasius *or* Tertullian.

7. Sketch the Trinitarian Controversy in its various movements and phases from 318 to 361.

8. Explain clearly the question at issue in the Apollinaristic Controversy, and the orthodox decision regarding it.

9. Give an exact account or summary of the so-called Nicæno-constantinopolitan Creed, and refer to the recent views of Harnack and others regarding it.

10. Decribe the Easter Festival as celebrated in the Fourth Century, and give some account of the divergences in the observance of it and the controversies connected therewith.

11. Point out the causes of the conflict between the representatives of the Church of England and the Church in Scotland during the Seventeenth Century; and consider how much of it was due to the idiosyncrasies of James VI., Charles I., and Laud.

12. Write historical notes on the following:—(1) Laud's Liturgy; (2) The Protesters and Resolutioners; (3) The Test Act; (4) The behaviour of the Puritans in Scotland; (5) The Revolution Settlement.

13. Give some account of the theological writings of Samuel Rutherford and John Forbes, and of Calderwood's History and Baillie's Letters.

14. Compare the Westminster Standards with the Scottish Confession of 1560, and estimate the influence of their adoption by the Scottish Church upon its theological character and development.

Thursday, March 24, 1893.—10 *to* 1 *o'clock.*

1. Discuss the genuineness of the Ignatian Epistles, and what they may be held to establish regarding the Constitution of the Church in the time of Ignatius. Refer to the views of Baur, Bunsen, Cureton, Ritschl, and Harnack.

2. Trace the rise and development of the distinction between the Clergy and the Laity, and indicate the relative positions and functions of the various ecclesiastical officers instituted by A.D. 381.

3. Examine the views of Baur and Hatch regarding the influence of Pagan and Jewish Institutions on the origin and form of the organisation and constitution of the Church.

4. Give an account of the genesis, enactment, and administration of Ecclesiastical Law and of the Collections of Ecclesiastical Law that have been transmitted from this period. Distinguish the degrees and kinds of Authority recognised in Presbyters, Bishops, Patriarchs, Primates, Synods, and Councils.

5. "The patristic theology and literature can never be thoroughly understood without a knowledge of the heresies of the patristic age." Illustrate this statement by reference to the chief heresies.

6. Give an account of the Alexandrian School of Theology and of its influence on the development of doctrine.

7. Give a historical and doctrinal account of (1) Docetism, (2) Patripassianism, (3) Homoiism, (4) Chiliasm.

8. Give an account of the convocation, proceedings, and doctrinal determinations of the Second Council of Constantinople, and review the question of its ecclesiastical validity and authority.

9. Examine the evidence bearing on the origin and authority of the Apostles' Creed, and refer to its forms during this period. Criticise Harnack's view.

10. Give a sketch of the development of Liturgies, Hymnology, and Christian Art in connection with the public worship of the Church during this period.

11. Delineate the condition of the Scottish Church at Christmas 1618 as regards its constitution, government, doctrine, and worship, and the position of the parties in the struggle then going on.

12. Give an account of (1) the Confession and Covenant of 1638, (2) the Solemn League and Covenant, (3) the Sanquhar Declaration, (4) the Claim of Right.

13. Write notes on (1) the liturgical history of the Scottish Church in the seventeenth century, (2) the chief theological writers of the Church during the same period.

14. On what grounds did the Covenanters justify their resistance to the Royal Authority? Give the chief events in the struggle from the passing of the Test Act till the Revolution Settlement. State how that Settlement was regarded and received by the different ecclesiastical parties in Scotland.

II.—SYSTEMATIC THEOLOGY.

Wednesday, October 26, 1892.—2 *to* 5 *o'clock.*

HISTORY OF CHRISTIAN DOGMATICS FROM THE REFORMATION TO THE CLOSE OF THE EIGHTEENTH CENTURY.

1. Give the titles of one of the chief works of each of the following theologians:—Luther, Melancthon, Brenz, Chemnitz, Calixt, Calov, Calvin, Beza, Fr. Turretin, Episcopius, Chillingworth, Halyburton, Owen, Howe, Bellarmin, and Bossuet.

2. How did Cartesian philosophy affect the history of theology?

3. Sketch the history of the Doctrine of Justification by Faith in the Lutheran Church from the Reformation to the close of the Seventeenth Century, referring particularly to the views of Luther, Osiander, the Formula of Concord, Calixtus and Spener.

4. Give an account of the Synod of Dort as regards (1) the controversy which occasioned it, (2) the doctrinal points at issue, (3) its procedure in discussion, and (4) its dogmatic decisions.

THE DOCTRINE OF HOLY SCRIPTURE.

1. Indicate what is, and is not, implied in the affirmations contained in the Protestant Creeds as to the *completeness*, the *perspicuity*, and the *infallibility* of Scripture as a rule of faith.

2. Enumerate the chief theories regarding the inspiration of Scripture, and point out the distinctive features in each of them.

3. Trace the influence of the Deistic controversy on the Doctrine of Holy Scripture.

4. Compare and criticise the Roman Catholic and Protestant dogmas of the Bible as the Rule of Faith. State the positions laid down in the Westminster Confession.

DOCTRINES OF PREDESTINATION, CREATION AND PROVIDENCE.

1. Show how these three doctrines are inter-related.

2. Can the Divine "preservation" of the universe be properly considered "a continuous creation" or "perpetual re-creation"? Discuss the question.

3. Review the expositions of the Doctrine of Predestination by Augustine, Zwingli and Calvin, and its symbolical formulation in the Thirty-Nine Articles.

4. Discuss the following points :—(1) The distinction drawn between a general and a special Providence ; (2) God's Providence in relation to Freewill and Sin.

Thursday, March 23, 1893.—2 *to* 5 *o'clock.*

HISTORY OF CHRISTIAN DOGMATICS FROM THE REFORMATION TO THE CLOSE OF THE EIGHTEENTH CENTURY.

1. State generally how the Reformation affected doctrinal development, and indicate especially in what respects it involved departure from medieval theology.

2. What were the leading characteristics of Lutheran Dogmatics in the seventeenth century?

3. How was the development of Christian Dogmatics influenced by

the following writers:—Amyraut, Cocceius, Faustus Socinus, Grotius, Samuel Clarke, and Samuel Rutherford?

4. Trace the influence of English Deism and German Rationalism on the Dogmatics of the Eighteenth Century, and generalise its effect as a whole.

THE DOCTRINE OF HOLY SCRIPTURE.

1. What were the chief points as to the Doctrine of Scripture controverted between Catholics and Protestants during the Reformation period?

2. Classify and describe the theories of Inspiration, mentioning the names of some of the writers by whom each of them has been maintained.

3. How has the progress of Biblical Criticism and Exegesis since Semler affected the Doctrine of Holy Scripture, and its application in the Dogmatic Methods of the Nineteenth Century?

4. Examine the views of Schleiermacher, Rothe, Ritschl, and Hodge, as to the Authority and Sufficiency of Scripture in the scientific elaboration of Christian Doctrine.

DOCTRINES OF PREDESTINATION, CREATION, AND PROVIDENCE.

1. Give a summary of St Paul's teaching as to Predestination, and compare and contrast it with Augustine's.

2. Explain the Biblical terms used to express Creation and Providence; sum up their meaning in two formal definitions or doctrines; and consider how far these doctrines are peculiar to the Religion of the Bible.

3. Is a doctrine of Creation essential to the system of Christian Theology? Refer to current views. Discuss the theories of (1) Eternal Creation, (2) Creation *ex nihilo*, (3) Mediate Creation.

4. Indicate the facts from which, and the principles on which, it may be, in your opinion, most safely and effectively argued that History justifies belief in Providence.

III.—BIBLICAL CRITICISM.

Thursday, October 27, 1892.

I.—NEW TESTAMENT CRITICISM.

1. State what you remember of the different readings in Acts xx. 28, where the Textus Receptus has *τὴν ἐκκλησίαν τοῦ θεοῦ, ἣν περιεποιήσατο διὰ τοῦ ἰδίου αἵματος.*

2. What are the Syriac Versions? Give an account of each. Attempt to assign to them dates and values.

3. Give an account of the New Testament Manuscript Σ.

II.—OLD TESTAMENT INTRODUCTION.

4. State the principles on which the Pentateuch is sub-divided by the majority of critics, and give the different dates assigned to the portions.

5. Give an approximate statement of the amount assigned to each of the three principal authors or editors of the Pentateuch—or Hexateuch (exclusive of Deuteronomy).

6. Compare the theories of Dillmann and Kuenen as to the relative dates of the principal portions—of Deuteronomy in particular.

7. Give some account of the theories of the new French School of critics regarding the composition and date of the Old Testament books.

PROPHETICAL BOOKS.

8. (*a*) Give a summary of the reasons for and against the Isaianic authorship of Isaiah xl.-lxvi. ; (*b*) Note and discuss the points on which the different views are at conflict. (*c*) Do you know of any attempts to sub-divide the twenty-seven chapters?

9. Sketch an introduction to Jeremiah under the following heads :—

(*a*) The author and his times.
(*b*) The arrangement of the prophecies.
(*c*) The text of the book.
(*d*) Non-Jeremianic passages.

10. Mention the name and date of the earliest prophetic writing of undisputed date, and show what relation it occupies to Pentateuchal law and narrative.

11. What are the older *and* the more recent views as to the date of Joel? Show how either the one *or* the other of these views deals with the facts of the case, as they are given in the prophecy itself.

12. What dates have been assigned for the second part of Zechariah, and why?

III.—NEW TESTAMENT.

13. What is the "Muratorian Canon"? Give an account of its contents, probable date, and critical value.

14. Translate—*Διέπρεπέ γε μὴν κατὰ τούτους ἐπὶ τῆς 'Ασίας τῶν ἀποστόλων ὁμιλητὴς Πολύκαρπος, τῆς κατὰ Σμύρναν ἐκκλησίας πρὸς τῶν αὐτοπτῶν καὶ ὑπηρετων τοῦ κυρίου τὴν ἐπισκοπὴν ἐγκεχειρισμένος. Καθ' ὃν 'εγνωρίζετο. Παπίας τῆς ἐν 'Ιεραπόλει παροικίας καὶ αὐτὸς ἐπίσκοπος.* —*Eus. H.E.* iii., 36 ; *Canonicity*, p. 53.

15. What is the evidence for and against our Canonical Greek Gospel of St Matthew being an original document?

16. Translate—Ὁ *μέντοι γε πρότερος αὐτῶν ἀρχηγὸς ὁ Τατιανὸς συνάφειάν τινα καὶ συναγωγὴν οὐκ οἶδ' ὅπως τῶν εὐαγγελίων συνθεὶς τὸ διὰ τεσσάρων τοῦτο προσωνόμασεν· ὃ καὶ παρά τισιν εἰσέτι νῦν φέρεται. Τοῦ δ' ἀποστόλου φασὶ τολμῆσαί τινας αὐτὸν μεταφράσαι φωνὰς, ὡς ἐπιδιορθούμενον αὐτῶν τὴν τῆς φράσεως σύνταξιν.—Canonicity*, p. 72.

17. State what you know of Tatian and his testimony to the Gospels.

Friday, March 24, 1893.

A.—OLD TESTAMENT INTRODUCTION.

PENTATEUCH.

1. How many main strata does modern criticism distinguish in the Pentateuch? In what order does it arrange, and to what dates does it assign them? What are the general grounds for the position and date of each?

2. What is the extent of the "Book of the Covenant"? Give a topical account of its contents? To which document does it belong? What does modern criticism say as to its origin and date?

3. What is the great difference between the Graf-Wellhausen school of Pentateuch Criticism and its predecessors? Give a historical sketch of the rise and development up to the present time of this theory.

4. (*a*) What is said to be the original Deuteronomy, and why?
(*b*) How does modern criticism account for the reception with which Deuteronomy met in the time of Josiah?

5. (*a*) Mention the chief references to law, ritual, and history in Amos, and state the ways in which these are explained by the opposite schools of criticism.
(*b*) Quote and remark on any express reference to written law in Hosea.

6. Where does the law as to kingship occur? What does it say? Account for its form.

PROPHETICAL BOOKS.

7. What does modern criticism include under "Isaiah" and "Deutero-Isaiah"? What passages in "Isaiah" (exclusive of Deutero-Isaiah) are commonly alleged to be non-Isaianic? Formulate in general terms what is known as the historical principle on which this criticism proceeds.

8. Exhibit in detail the application of this principle to Deutero-Isaiah.

9. Mention the various critical views that would require to be dealt with in introductions to Zechariah, Joel, and Micah.

10. Give the arguments for the view you favour as to the date of Joel. What are the special difficulties of this view, and how are they to be obviated?

11. Show with regard to Amos and Hosea (1) how far they were preachers of morality, (2) how far, and in what sense they inculcated the worship of God, (3) how far they predicted the future, and what that future was.

12. To what date is Nahum to be assigned, and on what grounds? Give a summary of the contents of the book.

B.—NEW TESTAMENT INTRODUCTION.

TEXTUAL CRITICISM.

13. Give the evidence for and against the last verses of St Mark's Gospel xvi. 9-20.

14. Give the name and description of each of the Uncial MSS. (of the Gospels) of the sixth century.

ORIGIN OF THE CANON.

15. Translate :—

Οὗτος καὶ διὰ τεσσάρων καλούμενον συντέθεικεν τὸ εὐαγγέλιον, τάς τε γενεαλογίας περικόψας, καὶ τὰ ἄλλα ὅσα ἐκ σπέρματος Δαβὶδ κατὰ σάρκα γεγενημένον τὸν Κύριον δείκνυσιν. Ἐχρήσαντο δὲ τούτῳ οὐ μόνον οἱ τῆς ἐκείνου συμμορίας, ἀλλὰ καὶ οἱ τοῖς ἀποστολικοῖς ἑπόμενοι δόγμασι, τὴν τῆς συνθήκης κακουργίαν οὐκ ἐγνωκότες, ἀλλ' ἁπλούστερον ὡς συντόμῳ τῷ βιβλίῳ χρησάμενοι. Εὗρον δὲ κἀγὼ πλείους ἢ διακοσίας βίβλους τοιαύτας ἐν ταῖς παρ' ἡμῖν ἐκκλησίαις τετιμημένας, καὶ πάσας συναγαγὼν ἀπεθέμην καὶ τὰ τῶν τεττάρων εὐαγγελιστῶν ἀντεισήγαγον εὐαγγέλια.

16. How far is the foregoing description true of Tatian's Diatessaron as we have it?

17. Describe and estimate the Gospel of Peter as lately found.

18. Give a concise catena of the evidence for our Canonical Gospels down to the end of the second century.

BACHELORS OF DIVINITY.

13th April 1893.

1 Duncan Cameron, M.A.
Adam Wightman Fergusson, M.A.
James Ogilvy Fenton Gracie, M.A.
John Hunter, M.A.
5 David Miller Kay, M.A., B.Sc.
William Andrew Knowles, M.A.
George Lowe, M.A.
John Muirhead, M.A.
John du Plessis, B.A.
10 John Sinclair Stevenson, B.A.

DEGREE OF DOCTOR OF DIVINITY (D.D.).[1]

The Degree of Doctor of Divinity is conferred *honoris causâ tantum:*—and is granted in absence in special cases only. The Register of Doctors of Divinity begins in 1709, with the names of Edmund Calamy, Daniel Williams, and Joshua Oldfield. The names of Evans, Harris, and Isaac Watts follow in 1728. The Register now includes above 300 names.

The following is a list of those who have received the Degree of Doctor of Divinity in the years 1889-93 inclusively[2]:—

1889.

*Griffith John
*Professor Abraham Kuenen
Archibald Henry Sayce, M.A.
Norman M. L. Walker

1890.

David Douglas Bannerman
R. H. Lundie, M.A.
Canon J. H. Overton

1891.

Richard Glover.
Robert Hutton, M.A.
*John Gibson Paton.
D. W. Simon, M.A., Ph.D.

1892.

William Balfour
Cornelius Giffen
Newham Hall

13th April 1893.

Rev. Thomas Nicol, B.D., Minister of Tolbooth Church and Parish, Edinburgh.
Rev. Thomas B. W. Niven, Minister of Pollokshields Parish, Glasgow.
Rev. George Adam Smith, M.A., Professor of Hebrew and Old Testament Exegesis, Free Church College, Glasgow.
Rev. James Wells, M.A., Free Church of Pollokshields, Glasgow.

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[1] Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent ceremonial, on giving at least a week's notice.

[2] The names of those who received the Degree, prior to 1859, will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University, since its foundation," published in 1858, and the names of those who received the Degree from 1859 to 1888, both years included, will be found in the List of Graduates, published in 1889.

* Conferred *in absentia.*

Bursaries, Scholarships, Fellowships, &c.

I.—BURSARIES.

A.—PRESENTATION BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	Years.	Annual Allowance to each Bursar	Patrons.
I.	1703	Agnes Nairne.	£3 0 0	1	1	..	Senatus Academicus.
II.	1715	Sir James M'Lurg of Vogrie, sometime Dean of Guild of Edinburgh.	8 6 8	1	4	£8 6 8	Dean of Guild of Edinburgh, and Wm. Brown, Esq., surgeon, alternately
III.	1764	Rev. John Penman, Minister of Bothkennar.	8 0 0	1	4	8 0 0	R. G. G. Gilmour of Craigmillar.
IV.	1766	Rev. Robert Alexander, Minister of Girvan.	About 19 0 0	1	4	About 19 0 0	Kirk-Session of Girvan and Presbytery of Ayr.
V.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk	14 8 0	1	4	14 8 0	Governors of George Heriot's Trust, Principal of the University, Minister of the High Church, & Minister of New Greyfriars' Church.
VI.	1838	Do. Do.	About 23 0 0	1	4	About 23 0 0	The Principal, and Profs. of Hebrew, Divinity, Church History.
VII.	1838	J. Stewart Hepburn of Colquhalzie, Esq.	13 2 6	1	3	13 2 6	Committee of the Presbytery of Edin.
VIII.	1858	Do. Do.	13 2 6	1	3	13 2 6	Do.
IX.	1864	Do. Do.	13 2 6	1	3	13 2 6	Do.

I. In abeyance at present.

II. The *M'Lurg Bursary* is tenable for four years at the Theological Classes. *Bursar*—1892, *Robert Hall.*

III. The *Penman Bursary*—1892, *George Beale, M.A.*

IV. This Bursary consists of the interest of £420, lent on heritable security, and of £75, 17s. of accumulated interest. It must be held by a Student from the parish of Girvan, presented by the Session; whom failing, by one within the Presbytery of Ayr, to be appointed by the Presbytery. *Vacant.*

V. The *Blair Bursary* can be held only by a young man who has been brought up in George Heriot's Hospital, and has become a Student of Divinity in the University of Edinburgh. The amount depends on the rate of dividend payable on the stock in which the foundation money is invested. *Bursar*—Vacant.

VI. To be applied for the benefit of a Student of Divinity, whether a graduate or not. *Bursar*—1892, *Alex. R. Howell, M.A.*

VII., VIII., and IX. The sums attached to these Bursaries are payable to Divinity Students of the Church of Scotland of the first or second year towards the expense of their education at the University of Edinburgh. Each is tenable for three years. For one bursary Gaelic-speaking students have a preference; for all, Students from the Presbyteries of Weem and Auchterarder. *Bursars*—1891-2, *George Beale, Charles D. M'Intosh.*

B.—COMPETITION BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1646	Buchanan of that Ilk.	£20 16 8	2	3	£10 8 4	Town Council.
II.	1666	William Struthers.	13 17 9	1	3	13 17 9	Do.
III.	1685	Archibald Leighton.	7 10 0	1	3	7 10 0	Do.
IV.	1687	Andrew Ramsay and Sir Andw. Ramsay of Abbotshall.	16 13 4	1	3	16 13 4	Do.
V.	1695	King William III.	50 0 0	2	2	25 0 0	Senatus Academicus.
VI.	1867	Miss Mary Ettles of Inverness.	110 9 3	3	3	About 35 0 0	Senatus.
VII.	1873	Grierson of Ogscastle's Trustees.	80 0 0	3	1	26 13 4	Senatus.
VIII.	1878	Mrs Isabella Webster.	150 0 0	2 1	3 3	56 5 0 37 10 0	Senatus.
IX.	1878	Dr Andrew Thomson	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
X.	1879	Mrs Barbara Mylne.	30 0 0	1	3	30 0 0	Moderator, Procurator, and Principal Clerk of General Assembly.
XI.	1882	William Renton.	19 17 8	1	3	19 17 8	Profs. of Theology.
XII.	1884	Robert Hunter.	33 15 0	2	2	About 16 17 6	Principal and Profs.
XIII.	1889	James Simson, Edinburgh.	175 0 0	7	3	25 0 0	Presbytery of Edinburgh.
XIV.	1892	Thomas Lockerby, London.	About 25 0 0	1	3	About 25 0 0	Senatus.

I. By Ordinance, No. 79, of the Scottish Universities' Commissioners, and subsequent Order of her Majesty in Council 1868, each of the Buchanan Bursaries is open for competition to all Masters of Arts of any of the Universities of Scotland, or to Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours, entering on their first or second Session in the Faculty of Divinity in the University of Edinburgh. No person is admissible to competition who has for more than one Session been a Student in the Faculty of Divinity in any of the Scottish Universities. Each Bursar holds his Bursary for three years, subject to this condition, that he shall, during that period, give regular attendance, as a Student of Theology, in the University. If it appears to the Senatus Academicus desirable, for the purpose of distributing the benefits of competitive Bursaries in Theology among Students of different years, it is lawful, for that purpose only, to appoint a Student for a shorter period. No person can hold the Bursary along with any other Bursary, Fellowship, or Scholarship in any Scottish University. *Bursars—J. K. Wilkin, M.A.*, for two years. One vacant.

II. By Ordinance, No. 80, of the Universities' Commissioners, and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—Vacant.

III. By Ordinance, No. 85, of the Univ. Com., and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—Vacant.

IV. By Ordinance, No. 81, of the Univ. Com., and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—Vacant.

V. By Ordinance, No. 76, of the Universities' Commissioners, and subsequent Order in Council, each King William Bursary is open to competition to all Masters of Arts of any of the Universities of Scotland, or Students who have passed the necessary examinations for the Degree of M.A., and who have attended for one Session, and no more, in the Faculty of Divinity in the University of Edinburgh : Provided that no person shall be a competitor who has attended for one or more Sessions in the Faculty of Divinity in any other of the Scottish Universities. The examinations in the competition shall be conducted by the Professors in the Faculty of Divinity in the University. Each Bursar shall hold his Bursary for two years, subject to the condition that he shall, during that period, give regular attendance as a Student of Theology in the University. No person shall hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University. When the two Bursaries fall vacant at one time, one Bursar shall be appointed for two years, and the other for one year. *Bursar*—1892, *David C. Stewart, M.A.*

VI. Founded in memory of her brother, J. Ettles, Esq., of Havannah. Open to those who have passed all the examinations for M.A., and are in the first year of their theological course. Cannot be held with any other Bursaries or Scholarships. *See* Deed of Foundation in CALENDAR for 1867-68. *Bursars*—1891, *Hotchkin H. Murray, M.A.* 1892, *W. J. Pennell, M.A.*

VII. As in the case of the Faculty of Arts (see No. LIII.), a student from the parishes of Crawford or Leadhills, is, if found duly qualified in respect of attainments, appointed to a Bursary in his first year, and holds it (unless he has failed to show himself a diligent student) to the end of his Theological curriculum. Failing any student from those favoured parishes, the Bursary or Bursaries will be thrown open to competition, but the winner only holds his Bursary for one year in each case. In the second and third years a student from Crawford or Leadhills has again a preference, but holds the Bursary for one year only. *See* p. 372 of CALENDAR, 1877-8. *Bursars*, 1892—First year, *William Smith, M.A.;* second year, *Robert Venters, M.A;* third year, *Archibald A. Miller, M.A.*

VIII. Founded by Mrs Isabella Webster, 38 Heriot Row, Edinburgh, in memory of her husband, George Webster, Esq. There are three Bursaries,—two of £56, 5s. each, and one of £37, 10s., open to Students of Divinity in connection with the Church of Scotland in their first year, who have successfully passed all their Examinations for the degree of M.A. in any Scottish university, whether they have actually graduated or not. Each is tenable for three years. *See*

Deed of Foundation in CALENDAR for 1878-9, p. 377. *Bursars*—1891, *John Ritchie, M.A.* (3 years); 1892, *J. G. Bailey, M.A.*

IX. For the *Thomson Bursaries* application may be made to Messrs Traquair, Dickson, & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, preferred. The subjects of Examination are Latin and Classical Greek, Mathematics and Natural Philosophy, Mental Philosophy (including Logic) and Moral Philosophy and Elementary Hebrew, Apologetics, and Greek Testament. *See* p. 374 of CALENDAR for 1880-81. *Bursars*—1890, *Duncan Cameron, M.A.* 1891, *John M'William, M.A.* 1892, *Charles Edward Stuart.*

X. *Mylne Bursary.*—Founded by Mrs Barbara Macaulay or Mylne, in memory of her husband, the Rev. Andrew Mylne, minister of the parish of Dollar. The Bursary (being the free proceeds of £750) which is for behoof of Students for the ministry of the Church of Scotland, of Scottish birth, tenable during the curriculum in Divinity, is awarded at the end of the session, after examination (of first year's students) on the subjects taught in the Theological Classes during the session. No one may become a Candidate who has not given his whole time to study during the session preceding the date of Examination, nor may the holder engage in paid work during any session in which he holds the Bursary. It cannot be held along with any other Bursary, Scholarship, or Endowment. *See* Deed of Foundation at page 377 of CALENDAR for 1880-1. Vacant.

XI. Founded by the late William Renton, of 20 Royal Terrace, Edinburgh. The Faculty of Theology are the Patrons and Trustees. The Bursary may be held for three years, if the Bursar continues so long to prosecute his studies in Theology at the University of Edinburgh, with a view to the ministry in the Church of Scotland, and if not, then for the whole period he continues at the same. The student presented must have attained the age of sixteen, and not exceed the age of twenty-one years, and must be appointed after an examination in the month of November on such subjects as the Professors of the Faculty of Theology consider proper. 1890, *James A. Robertson, M.A.*

XII. Founded by the late Robert Hunter, Dalhousie, Chesters; the Principal and Professors being Patrons. These Bursaries are for the benefit of Students of the Church of Scotland, and are awarded at close of first Session in Divinity, and are tenable for two years. Bursars must attend two Sessions in Chemistry and Geology, taking at least one of these Classes each Session. Students of the name of Hunter and Hamilton from the parishes of Temple or Cockpen have a preference, but preferential Candidates must attain to a fixed percentage. Bursars must produce certificates of diligence in the Classes of Chemistry and Geology. See excerpt from Deed of Foundation, page 437 of CALENDAR for 1885-86. Vacant.

XIII. These Bursaries are open to Students who are entering on their first Session in Divinity, and are tenable for three years. For further details and subjects of examination (which differ somewhat from the University Examination for first year's Bursaries), apply to the Rev. Dr Langwill, Currie, or to the Rev. John Patrick, Greenside, Edinburgh. *Bursars*—1890, *John Muirhead, M.A.; Ian R. Fraser, M.A.*

XIV. Founded by the late Thomas Lockerby, Esq., London. The Bursary is tenable for three years, and is open to "Students who desire to become ministers of the Church of Scotland only." *See* Excerpt from Disposition, page 545 of CALENDAR for 1890-91. *Bursar*—1892, *D. G. Hamilton, M.A.*

C.—PRESENTATION BURSARIES, Open only to Graduates or Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1695	Robert Bayne of Pitcairley.	£25 0 0	1	3	£25 0 0	Society of Sons of the Clergy.
II.	1695	James Nairne.	16 13 4	1	3	16 13 4	Prof. of Divinity.

I. This formerly belonged to Ferguson of Raith, and was sold by him to the late Principal Lee; and by Principal Lee's representatives to Professor Crawford; and by Professor Crawford's representatives to the Society for the Sons of the Clergy. By Ordinance, No. 71, of the Universities' Commissioners, and subsequent Order in Council, the following are the regulations as to this Bursary:—Each Bursar shall hold the Bursary for three years, subject to the condition that he shall, during that period, give regular attendance as a Student in Theology in the University of Edinburgh. No person shall hold the Bursary along with any other Bursary, or with any Scholarship in the University. *Bursar*—1892, *John Burr, M.A.*

II. This Bursary is tenable for three years, or for such period as the Bursar shall give regular attendance as a Student of Theology in the University of Edinburgh. *See* Ordinance, No. 67, of the Universities' Commissioners, and subsequent Order in Council. *Bursar*—1892, *John Edgar, M.A.*

D.—BURSARIES gained in Faculty of Arts, the holders of which are at liberty to study in the Faculty of Divinity.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1809	Dr Donald Grant, London.	£180 0 0	2	4	£90 0 0	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal and two Professors.
III.	1871	The Sibbald Trustees.	About 150 0 0	5	3	About 30 0 0	The Trustees of Dr J. R. Sibbald.
IV.	1839	Daniel Maclaurin, London.	70 0 0	1	4	70 0 0	Town Council.

I. *See* under Faculty of Arts, No. XXVIII. Grant Mortification (pp. 251 & 256).

II. *See* under Faculty of Arts, No. XXXIII. Jamieson Bursary (pp. 251, 256, & 286).

III. *See* under Bursaries in Arts, No. LII. Sibbald Bursaries (pp. 252, 258, & 285).

IV. *See* under Faculty of Arts, No. LXXX. Maclaurin Bursary (pp. 253 & 263).

II.—PRIZES.

I.—BARTY MEMORIAL PRIZE.

The Barty Memorial Prize of £20 for scholarship in Hebrew and Hellenistic Greek is open to entrants to the Divinity Halls of the four Scottish Universities.

1888-89. S. J. Ramsay Sibbald, Edin.
1889-90. David M. Kay, M.A., B.Sc. Edin.
1891-92. George Beale, M.A. Edin., and George Christie, St Andrews.
1892-93—T. Graham Bailey, Edinburgh.

II.—HEPBURN PRIZE.

The Hepburn Prize of £25 (which may be divided), open to all Students in actual attendance at the Divinity Hall, may be awarded annually for an essay on a prescribed subject.

1891. Divided between Martin B. M. Innes and Adam W. Ferguson.

III.-XII. THE GUNNING VICTORIA JUBILEE PRIZES.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded ten prizes in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Prizes."

These prizes are ten in number, and comprise a series of five prizes of £50, £40, £30, £20, and £10, for excellence in Theological subjects, and a series of five prizes of similar values for excellence in Natural Science subjects. In their order the prizes in each series correspond in value. A minimum standard of proficiency will be required in each series. The successful competitors may each take both the prize in the Theological, and the prize in the Natural Science series to which their marks may respectively entitle them.

The prizes are competed for triennially at the close of the Divinity Session, and are open to all Students of the Church of Scotland, or other Scottish Churches holding the Confession of Faith, who are graduates of this University, or have attended two classes in the Faculty of Divinity in this University, and who have completed their Theological curriculum within two years of the close of the session when the competition takes place.

The examination in the Natural Science series will be on Natural History, Botany, and Geology, and of the same standard as the First B.Sc. Examination in Natural Science. The Examination in the Theological series will be in Theology proper, the Language and Literature of the Old Testament, Ecclesiastical History, and Biblical Criticism, The Examiners shall be the Professors of the subjects of examination in the University of Edinburgh; with the addition of a member of the Senatus of the New College, to be appointed by the Faculty of Divinity. See Revised Scheme, p. 519 of CALENDAR 1889-90.

The next examination under this scheme will be held at the close of Session 1895-96.

Theological Series—1st Prize—D. M. Kay, B.D., B.Sc.
2nd ,, Adam W. Fergusson, B.D.
3rd ,, Alexander Grieve, M.A.
4th and 5th Prizes not awarded.

Natural Science Series—1st and 2nd Prizes not awarded.
3rd Prize—Adam W. Fergusson, B.D.
4th ,, Alexander Grieve, M.A.
5th ,, D. M. Kay, B.D., B.Sc.

III.—SCHOLARSHIPS.[1]

I.—PITT CLUB DIVINITY SCHOLARSHIP.

This Scholarship was instituted in 1862 by the Pitt Club, is of the annual value of £111, 8s. 2d., and is tenable for three years. By Ordinance No. 77, of the Universities' Commissioners, this Scholarship is open to competition to all Masters of Arts of any of the Universities of Scotland who have given regular attendance in the Faculty of Divinity in the University of Edinburgh for three complete Sessions, and who are in the course of studying, with the view of becoming Clergymen of the Church of Scotland. No person is admissible who has been entered as a Student of Divinity more than six years prior to the time of the competition.

Candidates are examined on (1) The Evidences of Revealed Religion; (2) Systematic Theology; (3) Hebrew; (4) Church History; (5) Biblical Criticism. It cannot be held with any other Scholarship, Fellowship, or Bursary of any Scottish University, or along with any parochial or pastoral charge, whether as minister or assistant.

1887. George Galloway, B.D. | 1890. Alex. S. Martin, M.A.
1893. *David M. Kay, B.Sc., B.D.*

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[1] The names of Scholars are retained in the Calendar for five years.

It has been agreed by the Senatus and the Faculty of Divinity, in regard to the Fellowships and Scholarships of the funds of which they are severally the administrators, that

1. The *Pitt Theological Scholarship* (£108, 2s. 8d.) shall be competed for when it falls vacant.

2. The *Aitken Theological Scholarship* (£103, 14s. 2d.) shall be reserved from competition when it falls vacant in the same year with the Pitt.

3. The *Glover Divinity Scholarship* (£34, 8s.) shall (according to its conditions) not be open to competition when the Pitt or Maxton may be open, and shall be similarly reserved when the Aitken is open.

4. That meanwhile the *Maxton* (£42, 8s.) be competed for when it is vacant.

II.—MAXTON DIVINITY SCHOLARSHIP.

This Scholarship was founded by the Trustees of the late John Maxton, Esq., in 1867, is of the annual value of £42, 8s., and is tenable for three years. It is open only to Students who are members of the Established Church of Scotland, and who have completed the course of study in the Faculty of Divinity in the University of Edinburgh. (*See* Deed of Foundation, at p. 234 of CALENDAR for 1867-8.)

1887. Henry Ranken, B.D.
1890. John James Galloway, M.A.
1893. *Adam W. Fergusson, B.D.*

III.—THE GLOVER DIVINITY SCHOLARSHIP.

This Scholarship was founded in 1875 by Subscribers to a Fund for commemorating the memory of the Rev. W. Glover, D.D., and by the University Endowment Association. It is of the annual value of about £34, 8s., tenable for three years, and open to all Masters of Arts of any of the Universities of Scotland who have finished their study of Theology, before entering the Church of Scotland, within six years, and who have attended the last Session of their course at least in the University of Edinburgh. It cannot be held with any other Divinity Scholarship or Bursary in any Scottish University, and it is not offered for competition in any year where there is a vacancy in the Pitt Divinity Scholarship or the Maxton Divinity Scholarship. *See* Deed of Foundation, at p. 343 of CALENDAR for 1875-76.

IV.—THE AITKEN THEOLOGICAL SCHOLARSHIP.

This Scholarship, founded in 1875 by bequest of the Rev. David Aitken, D.D., formerly minister of Minto, is of the annual value of £109, 19s. 2d. Its purpose is to make provision for the study of Church History and Biblical Criticism at one or more University Seats in Germany, or elsewhere on the Continent of Europe, in the case of meritorious students at Edinburgh University. It is to be awarded, after competitive examination (on due proficiency being shewn), to a Student in Divinity of the University of Edinburgh, who is a Graduate in Arts of that University of not more than four years' standing. It is tenable for two years; but the Senatus may extend the term for another year if it appear to them desirable. The time of the competition to be fixed and publicly intimated by the Senatus at least three months before; and the Senatus are also at liberty to prescribe whether one Semester or two Semesters in the foreign University shall be attended in each year. It is not offered for competition in the same year as the Pitt Divinity Scholarship or the Glover Divinity Scholarship. *See* Deed of Foundation at p. 344 of CALENDAR for 1876-77.

1888. Alexander Still, B.D., who resigned it for the "David Kidd" Scholarship.
1889. John C. Matthews, B.D.
1892. *J. J. Trotter, M.A.*

V.—THE DAVID KIDD DIVINITY SCHOLARSHIP.

This Scholarship, which is of the annual value of £34, 6s. 10d., is tenable for three years, and is awarded, after competitive examination in Theology (same as for B.D.), to students of any of the Universities of Scotland who are natives of Scotland, and who have finished their course of study with the view of becoming Ministers of the Church of Scotland. *See* Deed of Foundation in CALENDAR for 1879-80, p. 354.

1888. Alexander Still, B.D. | 1892. *David A. Rollo, B.D.*

VI.—VANS DUNLOP SCHOLARSHIP IN HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all Matriculated Students (*a*) who have regularly attended Classes in the University for not less than two and not more than seven years, (*b*) who have attended at least two courses under the Professor of Hebrew and Oriental Languages, and (*c*) who have not discontinued attendance at the University for more than one year.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner to be appointed by the Senatus.

The conditions of tenure are the same as those applicable to the Vans Dunlop Scholarships in Arts. The next competition will take place on March 1893.

1890. { James Thomson, M.A., / Charles H. Titterton, M.A. } equal.
1893. *William B. Stevenson, M.A.*

VII.—VANS DUNLOP SCHOLARSHIP IN HISTORY.

The competition is open to all Matriculated Students of not less than two, and not more than six, years' standing, who have attended one or more courses of Lectures either by the Professor of History or by the Professor of Ecclesiastical History, and who have not discontinued attendance at the University for more than one year. The Examiners are the Professor of History, the Professor of Ecclesiastical History, and either the Professor of Humanity or the Professor of Greek. The next Examination will be held in October 1892.

VIII.—BRUCE OF GRANGEHILL AND FALKLAND SCHOLARSHIPS.

These Scholarships were founded in 1865 by Mrs Tyndall Bruce of Falkland, and are of the annual value of £100. They come into operation only when a vacancy occurs in any one of the three Scholarships of this name in the Faculty of Arts, by the death, resignation, or dismissal, of a Scholar during the period of his tenure of the Scholarship; and are tenable in this Faculty during the remainder of that period. They cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 a year. The subjects of Examination are prescribed from time to time by the Faculty.

1887. J. More Middleton, M.A.
1888. Alexander S. Martin, M.A.
1891. David A. Rollo, M.A.
1893. *Thomas Marjoribanks, M.A.*

IX. and X.—THE JEFFREY SCHOLARSHIPS.

These Scholarships, two in number, were founded in 1887 by Miss Jane Jeffrey of Victoria Terrace, Portobello. They are each of the annual value of about £77, and are tenable for one year. They are awarded annually for special proficiency in the subjects embraced in each of the four departments of Divinity, Hebrew and Oriental Languages, Ecclesiastical History, and Biblical Criticism; and are open to Students of Divinity in connection with the Church of Scotland who shall have given regular attendance for at least one Session on the Divinity Classes in this University, including the class with which the Scholarship competed for is specially connected. They are competed for in the following order:—first year, Divinity, and Hebrew and Oriental Languages; second year, Ecclesiastical History and Biblical Criticism; and so on from year to year. The Examination at the close of Session 1892-93 is in Divinity and Hebrew and Oriental Languages. *See* Deed at page 497 of CALENDAR for 1888-89.

1889. *Divinity*—William C. Allan, M.A.
Prox. accessit, William Roger, M.A.
Hebrew and Aramaic—John William Murray.
1890. *Ecclesiastical History*—Peter Macgregor, M.A.
Biblical Criticism—Samuel Dunlop, B.A.
1891. *Divinity*—James M. Kirkpatrick, M.A.
Hebrew and Arabic—James N. Cuthbert, M.A.
1892. *Ecclesiastical History*—John Kennedy, M.A.
Biblical Criticism—S. J. Ramsay Sibbald, M.A.
1893. *Divinity*—William Knowles, M.A.
Semitic Languages—James Wedderspoon, M.A.

XI.—COBB SCHOLARSHIP.

This Scholarship, founded in 1889, is a bequest by the late Miss Matilda Johnston Cobb, Broughty Ferry. It is of the annual value of £35, and is tenable for three years. The subjects of Examination are Hebrew, Greek, Latin, and Mathematics, and the Scholarship is open to competition amongst Students who are entering on the study of Divinity with a view to becoming Ministers of the Church of Scotland.

1890. *John Hunter, M.A.*

IV.—THE GUNNING VICTORIA JUBILEE LECTURESHIP.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded a Lectureship in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Lectureship."

The Gunning Lectureship is a triennial appointment of the value of £100, and the appointment shall be made by the Faculty of Divinity. The Lecturer may be any Scottish Presbyterian clergyman at home, or in the Mission field, eminent in Science, Philosophy, Language, Antiquity, or Sociology, and the Lectures may be delivered in the University of Edinburgh, or such other place as the Faculty may appoint.

The next appointment will be made at the close of Session 1895-96. See Revised Scheme, p. 519 of CALENDAR 1889-90.

Lecturer appointed—

1893. *Hugh Macmillan, D.D., LL.D.*

SCHOLARSHIPS, BURSARIES, AND UNIVERSITY PRIZES,

OPEN FOR COMPETITION IN THE FACULTY OF DIVINITY DURING THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1893.[1] [2]

I. PRESENTATION BURSARIES.

1. *The Blair*, No. V., page 323.
2. *The Alexander Bursary*, No. IV., page 323.
3. *The Penman*, No. III., page 323.

II. PRESENTATION BURSARIES. OPEN ONLY TO GRADUATES OR STUDENTS WHO HAVE PASSED THE NECESSARY EXAMINATION FOR THE DEGREE OF M.A., BUT HAVE DEFERRED THEIR GRADUATION WITH A VIEW TO HONOURS.

The James Nairne, No. II., page 327.

III. COMPETITION BURSARIES.

The Bursary Examination at the beginning of Session 1893-94, will be held on Friday, 10th, and Saturday, 11th November, commencing at 10 A.M. each day, when the following Bursaries will be open for competition:—

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[1] *Note.*—None of the undernoted Bursaries or Scholarships can be held along with any other Bursary, Fellowship, or Scholarship in any Scottish University. None of the after-mentioned Prizes are subject to this condition.

[2] The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. For further information and for information regarding other Scholarships, Bursaries, and Prizes, &c., see pages 323 to 332.

1. *One Webster Bursary*, No. VIII., page 325.
2. *One Ettles Bursary*, No. VI., page 325.
3. *The Cobb Scholarship*, No. XI., page 332.
4. *One Thomson Bursary*, No. IX., page 326.
5. *The Renton Bursary*, No. XI., page 326.
6. *Two Buchanan Bursaries*, No. I., page 324.
7. *The Ramsay Bursary*, No. IV., page 325.
8. *The Struthers Bursary*, No. II., page 325.
9. *The Leighton Bursary*, No. III., page 325.

The subjects of examination for the above, and for *any other ordinary competition Bursary for first year's Students that may be vacant* at the opening of the Session will be—

(1.) *Latin*—Tacitus' "Agricola," and translation from English into Latin prose.
(2.) *Greek*—Euripides' "Alcestis," and Demosthenes' "Philippic," III.
(3.) *Mathematics*—"Euclid," Books I.-VI.; Algebra and Elementary Trigonometry.
(4.) *Metaphysics*—Ferrier's "Lectures on Greek Philosophy."
(5.) *Moral Philosophy*—Sidgwick's "History of Ethics."
(6.) *Natural Philosophy*—Blaikie's "Elements of Dynamics," and Balfour Stewart's "Elementary Physics."
(7.) *Hebrew*—Elements of Grammar.
(8.) *Apologetics*—Flint's "Antitheistic Theories."
(9.) *Greek Testament*—Acts of the Apostles and Epistle to Romans.

10. *Grierson Bursaries*, No. VII., page 325.

The subjects of examination for the Grierson Bursaries, if there be competition, will be:—

For the *first* year—
Same as for ordinary Competition Bursaries, except that *Hebrew*, *Apologetics*, and *Greek Testament* are omitted.

For the *second* year—

(1.) *Latin*—Lucretius, Book V., and Livy, Book II.
(2.) *Greek Testament*—Gospel of St Luke, and Catholic Epistles.
(3.) *Hebrew*—Grammar; Joshua, chapters i.-x. inclusive; Psalms i.-viii. inclusive.
(4.) *Divinity*—The Trinity; Doctrine of Sin.
(5.) *Ecclesiastical History*—To 325 A.D.
(6.) *Biblical Criticism*—Charteris' "Christian Scriptures."

For the *third* year—

(1.) *Apologetic Theology*—Butler's "Analogy."
(2.) *Hebrew*—Judges, Amos, Psalms, Book iii.
(3.) *Ecclesiastical History*—To 325 A.D., and of Scotland, 1500 A.D. to 1600 A.D.
(4.) *Biblical Criticism*—"Canonicity," pp. 1-23; 53-75.

11, 12, 13. *Three Simson Bursaries*, No. XIII., page 326.

14. *One Hepburn Bursary*, No. VII., page 324. Subjects of Examination: *Butler's Analogy*, Part I., and *Lightfoot's Epistle to the Philippians*, with the dissertations. For particulars apply to the Rev. Dr Scott, minister of St George's, Edinburgh, or Rev. Dr Langwill, Clerk of the Presbytery of Edinburgh.

15. *A Hepburn Prize*, £25 (which may be divided), for the best Essay on "Christianity and Stoicism," to be competed for by Students of second or subsequent year. The Essay not to exceed fifty pages 4to, and to be handed to Rev. Dr Scott, 16 Rothesay Place, Edinburgh, on or before 1st December 1893.

16. *Barty Memorial Prize*, of about £20, for Scholarship in Hebrew and Hellenistic Greek, is open to entrants to the Divinity Halls of the four Scottish Universities. Competitors to apply to J. W. Barty, Esq., Dunblane.

At the close of Session 1893-94, the following will be open for competition:—

1. *The Glover Scholarship*, No. III., page 330.

2, 3. *Two Jeffrey Scholarships*, Nos. IX. and X., page 331.

The subjects for the Scholarship in Ecclesiastical History are:—

1. The main facts in the Development of the Constitution, Doctrine, and Worship of the Church, from 150 to 323 A.D.
2. The Conversion to Christianity of Britain and Germany.
3. The History of the Church in Scotland from 1560 to 1690.

The subjects for the Scholarship in Biblical Criticism are:—

Robertson's "Early Religion of Israel."
"Canonicity," the Introduction.
"Canonicity," the Text, pp. 75-120 inclusive.

4. *Two King William Bursaries*, No. V., page 324.

5. *Two Robert Hunter Bursaries*, No. XII., page 326.

6. *The Mylne Bursary*, No. X., page 326.

UNIVERSITY PRIZES.

1. The *Lord Rector's Prize*, No. 2, page 283, on "The Influence of Commerce in shaping the Destinies of Nations in the Ancient and Modern World." The Prize is open to Students of the University, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus before 1st November, each bearing a motto, and containing the name, address, and University standing of the Candidate.

2. *Three Gray Prizes*, No. 6, page 283. For further information apply to the Rev. Dr Ritchie, Duns.

William Dickson Travelling Fund, page 280.

M. C. TAYLOR, D.D.,
Dean of the Faculty of Divinity.

III.

FACULTY OF LAW.

1893-94.

Dean.

PROFESSOR KIRKPATRICK, LL.D.

5 *Murrayfield.*

Programme of Classes.

FACULTY OF LAW.

SUMMER SESSION, 1893.

The Classes in the Faculty of Law will open as follows, and will close on Thursday, 20th July.

Classes.	Days of Opening, and Hours of Lectures.	Professors.	Class Fees.	
Civil Law	12 May, 4 o'clock	Prof. Goudy........	£5	5[1]
Constitutional Law and History.......	12 May, 5 ,,	Prof. Kirkpatrick.	3	3
Scots Law..............	12 May, 9 ,,	Prof. Rankine.....	5	5[1]
Med. Jurisprudence...	2 May, 10 ,,	Prof. Sir D. Maclagan.....	4	4

WINTER SESSION, 1893-94.

The Classes in the Faculty of Law will open on Tuesday, 17th October, and will close on Tuesday, 20th March 1894.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.	
Public Law	23 Oct., 3 o'cl.	Prof. Sir Ludovic Grant, Bart..	£3	3
Civil Law	17 Oct., 4 ,,	Prof. Goudy........	5	5[1]
Scots Law...	17 Oct., 9 ,,	Prof. Rankine.....	5	5[1]
Conveyancing..........	17 Oct., 9 ,,	Prof. Wood.........	4	4
Political Economy & Mercantile Law ...	17 Oct., 5 ,,	Prof. Nicholson...	3	3
Constitutional Law...	(*In Summer Sess.*)	Professor Kirkpatrick	3	3
Med. Jurisprudence...	(*In Summer Sess.*)	Prof. Sir D. Maclagan	4	4
Civil and Crim. Procedure (*Mondays*).	16 Oct., 5 o'cl. 20 *Lectures.*	Lecturer—John P. Coldstream, W.S.	1	1[2]
Practical Class (*Wednesdays*)	18 Oct., 10.30 to 12.30, or at such other hour as will suit the majority of the Students.		3	3[2]

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[1] This Fee is paid in Winter, and is for the Winter and Summer Sessions. Second Year's Course, £3, 3s.

[2] Five Shillings University Entrance Fee for non-matriculated Students.

Order of Study.

Extract from Minutes of a Meeting of the Faculty, 20th February 1863.

The Faculty having taken into consideration that the Course of Study in Law for the Degree of LL.B. extends over three Academical years, and that the natural order in which the various branches of the Course ought to be taken up is often departed from and sometimes altogether inverted—recommend Students, whether intending to graduate in Law or not, to attend the Lectures in the following order, viz. :—

First year—Civil Law ;
Second year—Scots Law ;
Third year—Conveyancing ;

and to attend the Lectures on Public Law, Constitutional Law and Legal History, and Medical Jurisprudence, during the Second and Third years of study, in such order as may be most convenient.

Courses of Lectures.

1893-94.

I. CIVIL LAW.

PROFESSOR GOUDY, LL.B.

The Course of Lectures on Civil Law extends over a Winter and a Summer Term, covered by one entrance-fee of £5, 5s. The Winter Lectures usually begin on 15th October, and continue until 20th March ; the Summer Lectures usually begin on 12th May, and end on 20th July.

The subject-matter of the Course is during the Winter Session the same as that qualifying for Graduation in Arts.

See page 106. The Summer Session will be devoted to the doctrines of Succession, Obligations, and Actions.

The Lectures will be equally adapted for students intending to enter the legal profession in Scotland or England, or qualifying for service in India or the Colonies.

Text-Books.—The Institutes of Gaius, and the Institutes of Justinian.

For preliminary reading, see page 106.

The "Muirhead Prize," and the "Forensic Prize," are offered annually for competition.

II. SCOTS LAW.

PROFESSOR RANKINE, LL.D.

Students are strongly recommended to make themselves familiar either with Erskine's "Principles" or his "Institutes" (edition by J. Badenach Nicolson, Esq., 1871). A new edition (the eighteenth) of the former work is the text-book of the Class.

1. Sketch of the Literature of the Law of Scotland—the sources of the Law—the interpretation of Statutes.

2. Personal Relations—marriage and the modes of proving it—patrimonial effects of Marriage—rights of husband and wife—dissolution of Marriage—divorce—tutors and curators—minors—insane—parent and child—succession—heritable and moveable—wills—trusts.

3. Wrongs—personal injury—defamation—ownership of heritable property—rights and liabilities incident thereto—ownership of moveables—copyright—patents.

4. Obligations and Contracts—general requisites, constitution, and construction — partnership — joint-stock companies—factory and agency—sale—commodate—pledge—letting to hire—leases—carriers—shipping—insurance—bills of exchange—cautionary—extinction of obligations—diligence—bankruptcy.

5. Parochial Law—burgh and county law—rates and taxes.
6. Law of Evidence.
7. Criminal Law.

Summer Session.

The Lectures on Criminal Law, and part of the lectures on the above subjects, are delivered during the Summer Session.

III. CONVEYANCING.

PROFESSOR WOOD.

The course of Lectures delivered from the Chair of Conveyancing will embrace the following subjects :—

BRANCH FIRST—*Deeds in General.*

1. Requisites as to external form, and the solemnities of execution and authentication. 2. Deeds privileged as regards these solemnities. 3. Delivery and acceptance.

BRANCH SECOND--*Deeds relating to Feudal Rights.*

1. Sketch of the feudal system and its bearing on the existing state of heritable rights in Scotland. 2. The writs constituting a feudal estate, and the respective rights of superior and vassal. 3. The writs used in the voluntary transmission, *inter vivos*, of such estate, and of lands formerly held by burgage tenure. 4. Charters by progress. 5. Services and Destinations. 6. Settlements and Marriage Contracts, so far as relating to heritage. 7. Entails.

BRANCH THIRD—*Miscellaneous Rights relating to Heritable Estate.*

1. Servitudes. 2. Leases. 3. Adjudications and Inhibitions. 4. Sequestrations. 5. Trust Deeds for Creditors. 6. Rights in Security. 7. Practical points on Examination of Title.

BRANCH FOURTH—*Miscellaneous Writs, relating mainly to Moveable Rights.*

1. Submissions. 2. Securities over moveables. 3. Cautioner's

Writs. 4. Life Insurance Policies Writs. 5. Discharges. 6. Partnership and Company Deeds. 7. Factories. 8. Negotiable Instruments. 9. Shipping Writs. 10. Wills and Marriage Contracts.

IV.—PUBLIC LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

Two Courses of Lectures will be delivered from the Chair of Public Law during the Session 1893-4.

1. A Course of Forty Lectures on the Philosophy of Law.
2. A Course of Forty Lectures on Public International Law.

1. The Course of Lectures on the Philosophy of Law will begin on Monday, 23rd Oct. 1893, at three o'clock.

The Lectures will be delivered five days a week. The course will be divided into two parts—

(*a*) The Science of Natural Law.

Books of Reference.—Lorimer, Institutes of Law. Ahren's, Cours du Droit Naturel. Lerminier, Philosophie du Droit. Bluntschli, The Theory of the State.

(*b*) The Science of Positive Law.

Books of Reference.—The Student's Austin. Holland, Jurisprudence. Markby, Elements of Law. Sir Henry Maine's Works.

2. The Course of Lectures on Public International Law will begin on 9th January 1894.

The Class will meet *four* days a week. The Course will include—

(*a*) An Historical Retrospect.

(*b*) Some Account of the Science and Literature of Public International Law.

Books of Reference.—Ward's Enquiry into the Foundation and History of the Law of Nations. Wheaton's History of the Laws of Nations; Introduction. Nys' Le Droit de la Gutrot et les Precurseurs de Grotius ; and Les Droits des Indiens and les Publicistes Espagnols. Phillimore's International Law, Vol. I. Bryce, Holy Roman Empire. Pardessus, Us et Coutumes de la Mer.

(*c*) An examination of the sources and a critical exposition of the leading doctrines of Public International Law.

Books of Reference.—Hall, International Law. Wheaton, International Law. Lawrence, Handbook of International Law. Woolsey, Introduction to the Study of International Law. Hertslet, Map of Europe by Treaty. Letters by Historicus. Pitt Cobbett, Select Cases.

V. CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK, LL.D.

These Lectures, which qualify for Graduation in Law, and as a half-course for graduation in Arts, are given in the Summer Session, daily, except Saturdays, at 5 P.M.; and a fortnightly examination is held on Fridays. Prizes are awarded for distinction in the class-examinations, and also for two essays on subjects to be afterwards announced.

Subject—The Constitutional History and Law of England, with occasional reference to the constitutions of other countries.

For elementary purposes, Students may use Mr Taswell-Langmead's "Constitutional History of England," and Mr S. R. Gardiner's "Student's History of England." For further study they should consult Stubbs's Select Charters and English Constitutional History; Hallam's Middle Ages, Chap. viii.; Hallam's Constitutional History of England, from Henry VII. to George II.; Sir Thomas Erskine May's Constitutional History, from the accession of George III.; The English Constitution by W. Bagehot; Guizot's Lectures on Representative Government; R. Gneist's Self-Government in England, 3d Edition, Berlin, 1871; Gneist's Geschichte und heutige Gestalt der Aemter und des Verwaltungsrechts in England, 2d Edition, Berlin, 1866;

Gneist's History of the English Constitution, translated by P. A. Ashworth, London, 1886; and Blackstone's Commentaries, Book IV., of Public Rights.

The Professor's Class Library (adjoining the Lecture Room, and superintended by his Class Assistant) may be consulted by members of the Class (both ladies and gentlemen), on Mondays and Thursdays, from 10.30 to 1.30 o'clock.

VI. MEDICAL JURISPRUDENCE.

PROFESSOR SIR DOUGLAS MACLAGAN.

For Synopsis of this Course, *see* under Faculty of Medicine.

VII. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

For Synopsis of this Course, *see* under Faculty of Arts.

LECTURESHIP ON PROCEDURE, CIVIL AND CRIMINAL.

LECTURER—JOHN P. COLDSTREAM, W.S.

This course will embrace an enumeration of the various Courts of Scotland, with the nature of their respective jurisdictions, the actions applicable to each, and the details of the procedure in carrying on the suits, whether civil or criminal.

> *Text-Books.*—Mackay's "Practice of the Court of Session;" Coldstream's "Procedure in the Court of Session;" Dove Wilson's "Sheriff-Court Practice in Civil Causes;" Macdonald's "Criminal Law;" Macdonald's "Criminal Procedure (Scotland) Act, 1887."

There is a Practical Class or Laboratory attached to the Class, which meets once a week for two hours, and in which the Student under instruction prepares the writs and pleadings proper to the action raised.

Class Prize Lists.

1892-93.

I.—PUBLIC LAW.

PRIZEMEN.—1. James Adamson and A. Blairford Smith—equal.
HONOURS.—3. F. M. Anderson; 4. Robert Montgomerie Samson; 5. Fran. A. Umpherston; 6. Robert S. Craig; 7. Louis C. Hallard.
ESSAY.—F. M. Anderson.

L. J. GRANT, BART., B.A., *Professor.*

II.—CIVIL LAW.

WINTER AND SUMMER SESSIONS, 1891-92.

PRIZEMEN.—1. Charles Lippe, M.A., Aberdeen (Muirhead Prize); 2. W. G. Wedderspoon, M.A., Edinburgh; 3. Buckham W. Liddell; 4. David Maxwell, M.A., Edinburgh.
CERTIFICATES OF DISTINCTION.—5. C. R. Gillies Smith, M.A., Edinburgh; 6. James D. Millar, M.A., Edinburgh; 7. Angus Burgess, M.A., Edinburgh; 8. George Morton, M.A., Edinburgh; 9. John G. Strachan; 10. Thomas S. H. Burns, M.A., Edinburgh; 11. Dugald Maclean, M.A., Edinburgh.

WINTER SESSION, 1892-93.

PRIZES.—1. A. C. Montgomerie Bell, M.A., Edinburgh; and Alex. S. Riach—equal; 3. Francis M. Anderson, B.A. Oxon.
CERTIFICATES OF HONOUR.—4. John A. T. Robertson, M.A., Edin.; 5. Hugo A. Hamilton, M.A., Glasgow, and John Walker, M.A., Aberdeen—equal; 7. Robert Macfie, M.A., Edinburgh, and Frank A. Umpherson, M.A., Edinburgh—equal; 9. John A. Christie, M.A., Edinburgh; 10. R. M. Samson; 11. Geo. H. Boyd, M.A., Edinburgh; 12. David N. C. Hogg, M.A. Edin.; 13. J. J. Maclean, M.A., Edinburgh.

HENRY GOUDY, LL.B., *Professor.*

III.—SCOTS LAW.

SUMMER SESSION, 1892.

1. A. D. Donald, Forfarshire; 2. Thomas C. Wade, M.A., Stirlingshire; 3. John Maxwell Young, Aberdeenshire; 4. Colin Campbell, Inverness-shire (*Prizemen*); 5. Thomas M. A. Pole, Shetland; 6. John Davidson Wallace, M.A., Inverness-shire; 7. Peter Buchanan, Perthshire; 8. J. Nicholson, Kent; 9. James Swain Saunders, Aberdeenshire; 10. William Grant, Banffshire, and

George Moir, Forfarshire—equal; 12. Robert White, Mid-Lothian; 13. Robert Carmichael, Perthshire, and G. M. Crawford, Mid-Lothian—equal; 15. Alfred A. Slidders, Forfarshire; 16. James Young, Fife; 17. David J. Gair, Mid-Lothian; 18. Robert Duncan, Kinross-shire; 19. John W. Young, Forfarshire; 20. Alexander Macmillan, Mid-Lothian; 21. James Thomson, Fife.

ESSAY PRIZES.—1. Robert Berry, Mid-Lothian; 2. Thomas C. Wade; 3. A. D. Donald.

WINTER SESSION, 1892-93.

1. W. Rose Black, M.A., Morayshire; 2. George Reid Donald, Forfarshire; 3. David Maxwell, Forfarshire; 4. P. M'Leod, Fife; 5. William Dinwoodie Robertson, Mid-Lothian; 6. William Murray, Wigtownshire; 7. Robert Connon, Kincardineshire; 8. James Cruickshank, Mid-Lothian (*Prizemen*); 9. John Macdougall, Inverness-shire; 10. J. R. Byers, Dumfriesshire; 11. Thomas Gibson, Roxburghshire; 12. Dugald Maclean, Argyleshire; 13. John Pearson, Forfarshire; 14. J. Aitken Welsh, M.A., Mid-Lothian; 15. George Law Sturrock, West Lothian; 16. John Gulland, Mid-Lothian; 17. David W. Deas, Berwickshire; 18. Allan S. Ramsay, Mid-Lothian; 19. Angus Burgess, Lanarkshire; 20. John A. Waters, Caithness; 21. John Little, Dumfriesshire; 22. William Allan, West Lothian, and Kenneth Maclennan, Ross-shire—equal; 24. Hugh S. Smith, Ayrshire; 25. James C. Edwards, Mid-Lothian; 26. Alfred William Lowe, Caithness; 27. James Duncan Millar, M.A., Mid-Lothian; 28. Thomas S. Kinnear, Forfarshire.

JOHN RANKINE, M.A., LL.D., *Professor.*

IV.—CONVEYANCING.

1. A. D. Donald, Forfar; 2. David J. Gair, Edinburgh; 3. James Young, Dunfermline; 4. Thomas M. A. Pole, Shetland; 5. Charles R. Beveridge, Dundee; 6. John Maxwell Young, Aberdeen; 7. T. C. Wade, Falkirk; 8. Alexander P. Simpson, Edinburgh (*Prizemen*); 9. James S. Saunders, Aberdeen; 10. G. M. Crawford, Edinburgh; 11. Colin Campbell, Inverness; 12. James H. Notman, Edinburgh; 13. David Moffat, Lanark, and John Romanes, Edinburgh—equal; 14. Peter Buchanan, Perth; 15. Robert White, Edinburgh, and George Moir, Forfar—equal; 16. James Ballantine, Wigtown; 17. J. D. Wallace, Inverness; 18. J. Arthur Greig, Edinburgh; 19. Robert Carmichael, Perth, and William Grant, Banff—equal; 20. James Harper, Kirkcudbright; 21. James Swanson, Caithness, and Alfred A. Slidders, Forfar—equal; 22. James M. Whitton, Forfar; 23. Alexander P. Mel-

ville, Edinburgh; 24. John Cameron, Ross; 25. James Thomson, Fife; 26. John M. Deas, Edinburgh; 27. G. A. J. Lee, Edinburgh; 28. Gordon S. Goldie, Fife; 29. A. W. Ketchen, Edinburgh; 30. John William Young, Forfar; 31. Alexander Hendry, Banff, and Thomas H. Williamson, Fife—equal; 32. J. Nicholson, Dumfries, and Thomas Ritchie, Clackmannan—equal; 33. Robert T. Faulds, Roxburgh; 34. William Paton Clunie, Fife; 35. William Roughead, Edinburgh; 36. James L. Alexander, Forfar; 37. Alexander Macmillan, Edinburgh; and R. A. Grierson, Dumfries—equal; 38. Allan Turner, Lanark; 39. J. Grafton Lawson, Forfar; 40. John S. Morton, Edinburgh.

J. P. WOOD, W.S., *Professor.*

V.—CONSTITUTIONAL LAW AND HISTORY.

SUMMER SESSION, 1892.

EXAMINATIONS.—1. George H. Boyd, M.A., William Chree, M.A., and John Linton, M.A.—equal (*Prizemen*); 4. William B. Stevenson, M.A.; 5. William D. Macdougall, M.A., David Maxwell, M.A., and Alexander S. Riach—equal; 8. Louis C. Hallard, M.A.; 9. James M. Thomson, M.A.: 10. James Adamson, M.A., and James S. Leadbetter, B.A., LL.B.—equal; 12. J. Erskine Dods, M.A.; 13. Alexander M'Callum, M.A.; 14. James Rose, M.A.; 15. A. D. Mutter, M.A.; 16. James D. Millar, M.A.; 17. Alexander J. L. Laing, M.A.

ESSAYS.—1. William B. Stevenson, M.A.; 2. Alexander M'Callum, M.A. (*Prizemen*); 3. Francis A. Umpherston, M.A.

JOHN KIRKPATRICK, LL.B., LL.D., *Professor.*

VI.—MEDICAL JURISPRUDENCE.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. W. D. Robertson (*Medallist*).

SECOND-CLASS HONOURS.—2. A. Blairford Smith; 3. James Adamson; 4. F. A. Umpherston; 5. R. S. Craig; 6. R. Munro; 7. W. D. Macdougall.

DOUGLAS MACLAGAN, KT., M.D., LL.D., *Professor.*

CIVIL AND CRIMINAL PROCEDURE.

FIRST-CLASS HONOURS.—1. William D. Robertson, Leith (*Prize*); 2. Robert Carmichael, Perthshire, and Robert A. Grierson, Dumfries—equal.

SECOND-CLASS HONOURS.—4. Alexander Macmillan, Mid-Lothian; 5. William Gow, Forfarshire.

JOHN P. COLDSTREAM, W.S., *Lecturer.*

Graduation in Law.

DEGREES OF BACHELOR OF LAWS (LL.B.) AND BACHELOR OF LAW (B.L.).

Two Degrees in Law are conferred upon Examination in the University of Edinburgh, viz., Bachelor of Law (B.L.) and Bachelor of Laws (LL.B.).

Either of these Degrees admits to the Profession of Law Agent, provided an Examination in the Practice of the Courts is passed to the satisfaction of the Examiners under the Law Agents Act.

The Degree of LL.B. admits to the Profession of Advocate without further examination.

Either Degree qualifies for admission to the General Council of the University.

Candidates for the Degree of LL.B. must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

Candidates for the Degree of B.L. need not be graduates in Arts; but, if not, they must have attended one or more Arts classes during one academical year in a British, Irish, or other recognised University, and must pass a Preliminary Examination in general knowledge according to the Regulations after stated.

Candidates with the necessary qualifications for either Degree, may present themselves for Examination in any number, not less than two, of the subjects prescribed, and they may present themselves on one or more subsequent occasions for examination in the remaining subjects; but on each occasion they must pass in two subjects at least. Two Law Graduation Examinations are held annually, the first beginning on the first Monday in July, and the second on the last Monday in October.

Candidates must enter their names and addresses at the office of the Clerk of Senatus, exhibit the necessary certificates, and pay the required fee, at least one week before the first day of the Examination.[1]

The Degree of Bachelor of Laws was instituted by an Ordinance of the Universities' Commissioners, dated 12th July 1862. The

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[1] If names are not entered, and fees are not paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the candidate can be admitted to examination.

Degree of Bachelor of Law (B.L.), was instituted by the University, and approved by Her Majesty by Order in Council, dated 6th August 1874.

The rules of the Ordinance, as amended by an Order in Council of 11th August 1884, are—

I. No one shall hereafter be admitted as a candidate for the Degree of Bachelor of Laws (LL.B.) . . . unless he be a Graduate in Arts of one of the Universities of Scotland, or of England or Ireland, or a Graduate in Arts of a colonial[1] or foreign University, whose Degree may, for this purpose, have been specially recognised by the University Court.

II. The Course of Study in Law necessary for the Degree of Bachelor of Laws shall extend over three Academical years, and shall include attendance on a Distinct Course in each of the six following Departments, viz.:—

1. CIVIL LAW	During Courses of not less than Eighty Lectures each.
2. LAW OF SCOTLAND	
3. CONVEYANCING, or, in the option of the Candidate, POLITICAL ECONOMY[2]	
4. PUBLIC LAW	During Courses of not less than Forty Lectures each.
5. CONSTITUTIONAL LAW and HISTORY	
6. MEDICAL JURISPRUDENCE[3]	

III. No one shall hereafter be admitted to Examination as a candidate for the Degree of Bachelor of Laws, until he has completed the course of study above prescribed; and no one shall be admitted as a candidate in any University unless two at least of the three Academical years of his course of study in Law shall have been in such University.

IV. Candidates for the Degree of Bachelor of Laws shall be examined, both in writing and *vivâ voce*, on each of the six Departments of Law above specified.

V. Each candidate must satisfy the Examiners that he possesses a competent knowledge of Law in each of the said Departments; and the Examiners shall further, in judging of the qualifications of candidates, have special regard to their acquirements in the two Departments of Public Law and Constitutional Law and History.

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[1] The following Degrees have been recognised in terms of this Section: B.A. of New Zealand University; B.A. of Cape of Good Hope University; B.A. of Dalhousie University, Halifax, Nova Scotia.

[2] This option, initiated by the Faculty of Law, was approved by Her Majesty by Order in Council on 11th August 1884. Conveyancing, however, continues to be compulsory, both as to attendance and examination, for candidates who desire their LL.B. degree to qualify them for the profession of a law-agent; and it continues compulsory as to attendance for candidates for the Bar.

[3] For names of authorised extra-academical lecturers, *see* page 424.

IX. Each candidate for the Degree of Bachelor of Laws shall pay a Fee of Five Guineas in respect of his Examination for the Degree.[1]

The Rules of the Order in Council of 6th August 1874 sanctioning the Degree of B.L., are as follows :—

XII. No one shall be admitted to Examination as a Candidate for the Degree of Bachelor of Law in the University of Edinburgh, unless he be a Graduate in Arts, qualified as prescribed in Section I. (of the Regulations for LL.B.), or unless he shall have studied in one of the Universities therein mentioned, during at least one Academical year, one or more of the subjects included in the course of Study in the Faculty of Arts, and shall have passed a satisfactory Examination in (1.) Latin, (2.) Greek, French, or German, and (3.) any two of the following subjects—namely, Logic, Moral Philosophy, and Mathematics. The Examinations shall be conducted by Examiners in Arts, together with some of the Law Examiners.[2]

XIII. The course of study in Law necessary for the Degree of Bachelor of Law in the University of Edinburgh shall extend over at least two Academical years, and shall include attendance on a distinct course, as specified in Section II. (of the Regulations for LL.B.), in each of the first three of the Departments therein mentioned,[3] and in any one of the other three Departments; and no one shall be admitted to Examination as a Candidate for the said Degree, unless two Academical years of his course of Study in Law shall have been in the University of Edinburgh.

XIV. The Examination for the said Degree of Bachelor of Law in the University of Edinburgh shall be conducted at the same time, and in the same manner, as that for the Degree of Bachelor of Laws, and the Candidates shall be examined in each of the Departments of Law on which they shall have given attendance, as above required.

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XVI. The Fee to be paid by each Candidate for the Degree of Bachelor of Law in the University of Edinburgh shall be the same as is provided by Section IX., with reference to Examinations for the Degree of Bachelor of Laws.[4]

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[1] If the Examination is taken in two or more parts, the fee for the first is £3, 3s., and for the second, £2, 2s., no fee being payable in respect of any Examination after the second.—Every Candidate for a Degree in Law must matriculate at the University for the year in which he appears for Examination or for Graduation. He must enter his name for graduation, and if not already a member of the General Council, must also pay the fee of £1 for Registration at least two clear days before the date of graduation.

[2] Candidates must pass in these subjects at the Ordinary Examinations for the Degree of M.A. in April and October (*see* REGULATIONS FOR GRADUATION IN ARTS).

[3] Viz., Civil Law, Scots Law, and Conveyancing : the option of Political Economy not applying to the B.L. degree.

[4] For Preliminary Examination in Arts, £1, 1s.; for First Examination in Law, £2, 2s.; for Second Examination in Law, £2, 2s. No fee is payable in respect of any Examination after the Second Examination in Law.

SUBJECTS OF EXAMINATION.

PRELIMINARY EXAMINATION FOR DEGREE OF B.L.[1]

The following Books are prescribed for French and German :—

FRENCH.—*Montesquieu's* Esprit des Lois, Books xi. to xiii. *Voltaire's* Charles XII. *Molière's* L'Avare. *Victor Hugo:* First Division of Selections ('Poésie') contained in L'Œuvre Complète de Victor Hugo (Extraits); Paris, Hetzel-Quantin, 1885. Some knowledge of the matter of the books prescribed as well as of their text is required. A passage from a work not prescribed may also be set. Moderate proficiency in French prose composition is required. Questions on French Grammar, Philology, and History will also be set. For these subjects reference may be made to *Saintsbury's* Primer of French Literature, to *Brachet's* Historical French Grammar, or *Clapin's* Primer of French Philology, and to *Charlotte Yonge's* Primer of French History.

GERMAN.—*Von Jhering*, Der Kampf um's Recht. *Lessing*, Minna von Barnhelm. *Goethe*, Hermann und Dorothea, Cantos I. and II. *Schiller*, Die Glocke. *E. J. A. Hoffmann*, Meister Martin (Lange's German Classics). Translation, composition, and some grammatical and historical knowledge will be required, as in French. Reference may be made to *Ravensberg's* German Grammar, *Selss's* Outline of the Literature of Germany, and *Sime's* History of Germany (Macmillan's Hist. Course for Schools).

LAW EXAMINATION (FOR DEGREES OF LL.B. AND B.L.).

Subjects for October 1893 (*and till further notice*).[2]

In PUBLIC LAW the subjects will be *The Philosophy of Law* and *Public International Law*. The books recommended for study are mentioned in the Synopsis of the Professor's Lectures.

In CIVIL LAW the examination for both degrees will be on the History of the Law of Rome, and on its Principles as explained in the Institutes of Gaius and Justinian. Candidates for LL.B. will also be examined on Book xviii., tit. i. (*De contrahenda emtione*) and Book xli., tit. i. (*de acquirendo rerum dominio*), of the Digest. The works of Professor Muirhead are recommended to candidates.

In CONSTITUTIONAL LAW AND HISTORY the subject will be—The Constitutional Law and History of England, down to the first Reform Act. The principal text-books are the works of Stubbs, Hallam, and May. See also Synopsis of the Professor's Lectures.

In the LAW OF SCOTLAND the subject will be the Municipal Civil Law. The works of Mr Erskine and Mr G. J. Bell in the latest editions are recommended to candidates.

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[1] The books, &c., prescribed for the Preliminary Examination for 1893-94, are subject to changes which the Universities Commissioners may make by Ordinance. It is not expected, however, that any compulsory change will be made before the beginning of the Academic year 1894-95.

[2] For subjects for July 1893, *see* CALENDAR, 1892-93, p. 300.

In CONVEYANCING the subject of Examination will be Redeemable Heritable Rights and Moveable Rights, including Arbitration and Cautioners' Law.

In MEDICAL JURISPRUDENCE the subjects will be—(1) Corrosive Poisons; (2) Wounds; (3) Infanticide; (4) Death from Asphyxia; (5) Testamentary Capacity.

In POLITICAL ECONOMY[1] the Examination will be on the subjects treated of in Mr J. S. Mill's "Principles of Political Economy." Candidates will also be expected to show some knowledge of the works of the recent writers mentioned in the Synopsis of the Professor's Lectures.

DATES OF EXAMINATIONS.

PRELIMINARY EXAMINATION FOR B.L. (1893-94).

Latin—10th October, 2.30-4.30, and 11th October, 9-11; 5th April, 9-11 and 11.30-1.30.
Greek, French, and German—11th October, 11.30-1.30, and 2.30-4.30; 4th April, 2.30-4.30, and 5th April, 3-5.
Logic—13th October and 3rd April, 11.30-1.30, and 2.30-4.30.
Moral Philosophy—14th October and 4th April, 9-11 and 11.30-1.30.
Mathematics—12th October and 6th April, 9-11, and 11.30-1.30.

Names to be given in and fees paid on or before 3rd October and 16th March for the Examinations in October and March respectively.

LAW EXAMINATIONS (1893).

3rd July and 30th October—Scots Law, 10; Constitutional Law and History, 3.

4th July and 31st October—Civil Law, 10; Constitutional Law and History, 3.

5th July and 1st November—Conveyancing, 10; Political Economy, 10; Medical Jurisprudence, 3.

6th July and 2nd November—Public Law, 10.

Oral Examinations on 10th July and 6th November.

Names to be given in, certificates shown, and fees paid, on or before 26th June and 23rd October, for the Examinations in July and October respectively.

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[1] Optional instead of Conveyancing; but see *supra*, footnotes, pp. 350 and 351.

Examination Papers for Degrees in Law.

B.L. PRELIMINARY EXAMINATION.

FRENCH.

Wednesday, 12th October 1892.—11.30 *to* 1.30 *o'clock.*

FIRST PAPER.

Translate, and answer questions on any three of the following passages :—

I. Montesquieu, *Esprit des Lois*, xii. 2, from "Les lois criminelles n'ont pas été perfectionnées tout d'un coup," to "intéressent le genre humain plus qu'aucune chose qu'il y ait au monde."

1. *Perfectionnées—trouvée—assurée—acquises.* Account for the form of the past participle in these cases.
2. Distinguish between *tout d'un coup* and *tout à coup.*
3. *Où l'on a.* Account for the *l'*, and state in what cases it is so used.
4. *Dit, pouvaient, prononça, fit.* Give 1st plural present, past definite, future, and imperfect subjunctive.
5. *Beau-père.* Give the plural, and mention three other compounds formed in the same way.
6. *Pût, puisse, ait.* Account for the subjunctive in these cases.
7. *Quelque.* When is this word variable? Distinguish between it and *quel que.*
8. *Sûres.* Account for the circumflex of *sûr*, and give three other instances of a similar use.

II. Voltaire, *Charles XII.*, book ii., from "Les deux rois parurent en présence le 13 juillet," to "il remporta une victoire complète."

1. *Parurent, commença, reçut, dit, fit, devait, combattait, prévalut.* 3rd sing. and plur. present, future, and imperfect subjunctive.
2. *Le* 13 *juillet.* Write this in words, as well as—on the 1st of July, on the 2nd of June ; Henry I., Francis II., Charles III.
3. *Auprès—près.* Do these words necessarily require *de* after them? Give examples.
4. *Douze mille.* Why not milles? What numerals take *s*, and under what conditions?
5. *Jeune prince.* Why without article?
6. *Quelque.* What is the corresponding pronoun?
7. *Ses yeux.* Give the singular.
8. *S'élança.* Give the 3rd sing. and plur. past definite negatively—interrogatively.

III. Molière, *L'Avare*, act i. scene 1, from "Je n'aurais rien à craindre si tout le monde vous voyait," to "je ne suis pas sûre qu'on entre dans mes sentiments."

1. *Si—voyait.* What tenses are used after *si*? Give examples.
2. *Voyait*, *fais*, *commença*, *tient*, *réduit*, *pu.* First plural present, past definite, past indefinite, future.
3. *Appuyé du.* When is *de* used after passive forms, and when *par*?
4. *Envers vous.* What difference of meaning is there between *vers* and *envers?*
5. *À boute heure; l'un de l'autre.* Give the plural of these.
6. *Surprenante.* When is the present participle variable?
7. *Tirée*, *rebuté*, *déguisée.* Account for the form of the past participle.
8. *N'ont.* Why not *n'ont pas*?
9. *Pour me voir.* Is the infinitive the verb-form used after all prepositions?

IV. Victor Hugo, *Extraits* (*Les Feuilles d'Automne*), from "Si parfois de mon sein s'envolent mes pensées," to "Mit au centre de tout comme un écho sonore."

1. *Parfois.* Mention some other adverbs formed with *fois*.
2. *Dispersées—choisie—suivie.* Account for the form of the past participle.
3. *Vivant*, *purlant*, *ouvrant.* Why is the participle left unchanged in these cases?
4. *Comme eux—les cieux.* Give the singular.
5. *Jette*, *mit.* 1st sing. and plur. present, past definite, and future.

SECOND PAPER.—2.30 *to* 4.30 *o'clock.*

I. Translate into French:—

Achmet the Third was at that time Emperor of the Turks. He had been placed upon the throne in 1703, by a revolution not unlike that which transferred the crown of England from James the Second to his son-in-law William. Mustapha, being governed by his mufti, who was hated by all the Turks, provoked the whole Empire to rise against him. His army, by the assistance of which he hoped to punish the malcontents, went over to the rebels. He was seized and deposed in form, and his brother taken from the seraglio and advanced to the throne, almost without spilling a single drop of blood. Achmet shut up the deposed Sultan in the seraglio at Constantinople, where he lived for several years, to the great astonishment of Turkey, which had been wont to see the dethronement of her princes always followed by their death. The new Sultan, as the only reward for a crown which he owed to the ministers and generals—in a word, to those who had taken part in the revolution—put them all to death, one after another, for fear they should one day attempt a second revolution. By sacrificing so many brave men, he weakened the strength of the nation, but established his throne at least for some years.

II. 1. Give some account of the part taken by *Catherine de Medici* and *Richelieu* in the government of France.

2. What traces of the old personal suffixes can you point out in the French verb?

EXAMINATION PAPERS FOR LL.B. AND B.L.

SCOTS LAW.

Monday, 4th July 1892.—10 *to* 2 *o'clock.*

(*Three Questions only in each group to be answered.*)

I.

1. In what circumstances, and to what effect, may jurisdiction be founded by arrestment?

2. Explain the law as to legitimation of children *per subsequens matrimonium.*

3. When, by whom, and to what effect, may a donation *inter virum et uxorem* be revoked?

4. State the main provisions of the subsisting Act relaring to Presumption of Life.

II.

1. What is the effect of a decree and of mutual decrees of divorce on the property rights of the spouses?

2. What is the nature of the landlord's hypothec in urban subjects? Over what does it extend, and how is it enforced?

3. What is required to establish a public right of way?

4. How is a patent taken out? What are the main objections to which it may be exposed?

III.

1. In marine insurance, what are (1) perils of the sea, (2) unseaworthiness, and (3) constructive total loss.

2. What are the main provisions of the Factors Acts? Explain fully any one of them.

3. What is the *actio quanti minoris*? In what circumstances is it available in our law?

4. In what respects and in what manner may the Memorandum of Association of a Joint Stock Company be altered?

IV.

1. Explain the law of Constructive Conversion in Settlements.

2. In what circumstances does compensation operate in extinguishing obligations? Illustrate from cases of partnership.

3. How is a settlement in the sense of the Poor Law acquired, and how is it lost?

4. State what you know of actions of poinding of the ground.

CONSTITUTIONAL LAW AND HISTORY.

FIRST PAPER.

Monday, 4th July 1892.—3 *to* 5 *o'clock.*

(*Six Questions only to be answered.*)

1. State and illustrate the views of James I. regarding the kingly office.

2. State and discuss the Impositions Case and its sequel.

3. Who was John Hampden? What were the chief issues raised in his famous lawsuit?

4. Explain the policy and aims of Charles II. and James II., and their results.

5. Who were the "King's Men" (or "King's Friends") in the reign of George III.? In what respects was their policy unconstitutional and disastrous?

6. Trace and discuss the causes of the American Revolution.

7. Sketch the progress of religious toleration from Cromwell's time down to 1829.

8. Discuss in outline any three of the following topics:—Cowell's *Interpreter*; Grand Remonstrance; Bill of Rights; Creation of New Peers; Wilkes's Case; Placemen in Parliament.

SECOND PAPER.

Tuesday, 5th July 1892.—3 *to* 5 *o'clock.*

(*Six Questions only to be answered.*)

1. On what earlier models was the Parliament of 1295 framed?

2. Enumerate and discuss the chief powers and privileges of Parliament as at the close of the Lancastrian dynasty.

3. Mention the chief symptoms of the renascence of Parliamentary independence under Henry VIII. and Elizabeth.

4. Describe in general outline the attitude of the Commons towards James I. and Charles I.

5. What is meant by parliamentary and economical reform? On what grounds was such reform proposed by Pitt and Burke respectively?

6. Give the substance and criticize the policy of the "Six Acts."

7. Sketch in their main features the Reform Acts of 1832, 1867, and 1885.

8. State your views concisely on any *four* of the following topics:—Haxey's case; Election Statutes of 15th century; Strode's Case; Pride's Purge; Aylesbury Men; Peerage Bill; Disabilities of Candidates for Parliament.

ROMAN LAW.

Tuesday, 5*th July* 1892.—10 *to* 2 *o'clock.*

Group I.

1. Give a brief historical sketch of the *comitia curiata*, explaining its constitution and functions.

2. Explain *manus*. Describe the modes by which it was created.

3. What legislative reforms were effected by the *lex Canuleia* and *lex Poetilia* respectively.

4. Give an account of the *Jus Flavianum*, *Jus Papirianum*, and *Codex Theodosianus.*

5. What was the *Edictum Salvianum*? Give a brief summary of the contents of the first book of Gaius' Institutes.

Group II.

1. *Jus autem potestatis, quod in liberos habemus, proprium est civium Romanorum.* Translate and comment on this passage.

2. What were *liberi spurii*, *naturales*, and *legitimi* respectively?

3. In relation to the tutory of *impuberes*, explain the nature of *tutela legitima*, *fiduciaria*, and *dativa*.

4. Compare the legal capacity of *infans*, *impubes*, and *filius-familias*.

Group III.

1. Define *ususfructus*. What was *quasi-ususfructus*.

2. *Traditionibus et usucapionibus dominia rerum, non nudis pactis, transferuntur.* Translate and explain. What were the conditions of *traditio* as a *modus transferendi dominii*?

3. State the general rules as to *praeteritio* in testamentary succession under the *jus civile.*

4. Explain the following terms:—"*substitutio vulgaris*;" "*legatum liberationis*;" "*praelegatum dotis*;" "*dies cedit.*"

Group IV.

1. Distinguish between *locatio rei*, *locatio operis*, and *locatio operarum*.

2. A has in his possession a quantity of corn. Some of it he has received as a *mutuum* from B, some as a *depositum* from C, the rest as a *pignus* from D. How far does the loss fall on A if it is all destroyed by fire (1) without fault; (2) through his *culpa levis*; (3) through his *culpa lata.*

3. What was an *atrox injuria*? Who could sue for damages on account of it?

4. What is an *exceptio*? Explain "*exceptio pecuniae non numeratae*," and '*exceptio pacti conventi*."

Group V.

Translate and comment upon the following passage :—

1. D. xlv. i., 85, § 3. Quod si stipulatus fuero, per te heredemve tuum non fieri quominus eam agam : si adversus ea factum sit, tantum dari? et unus ex pluribus heredibus promissoris me prohibeat : verior est sententia existimantium unius facto omnes teneri, quoniam licet ab uno prohibeor, non tamen in partem prohibeor, sed caeteri familiae herciscundae judicio sarcient damnum.

2. D. xviii. i., 76, § 1. Eum qui in locum emptoris successit, iisdem defensionibus uti posse, quibus venditor uti potuisset : sed et longae possessionis praescriptione, si utriusque possessio impleat tempora constitutionibus statuta.

3. D. xviii. i., 81 pr. Titius, cum mutuos acciperet tot aureos sub usuris, dedit pignori sive hypothecae praedia et fidejussorem Lucium : cui promisit, *intra triennium proximum se eum liberaturum : quod si id non fecerit die suprascripta*, *et solverit debitum fidejussor creditori*, *jussit praedia empta esse*, *quae creditoribus obligaverat*: Quaero, cum non sit liberatus Lucius fidejussor a Titio, an, si solverit creditori, empta haberit suprascripta praedia? Respondit, si non ut in causam obligationis, sed ut empta habeat, sub conditione emptio facta est, et contractam esse obligationem.

CONVEYANCING.

Wednesday, *6th July* 1892.—10 *to* 2 *o'clock.*

(*Any* 12 *of the following Questions to be answered.*)

1. Enumerate the casualties formerly exigible from vassals in feu-holdings, and mention which of these casualties are still demandable.

2. State the difference in form between a feu-charter and a feu-contract. What advantage does the latter form of writ confer on the superior?

3. In one feu-contract the feuar obliged himself, "and his heirs, executors, and successors whomsoever," for payment of the feu-duty. In another, he obliged himself "and his heirs, executors, and successors whomsoever, conjointly and severally." In both cases the feu was sold, the purchaser was infeft, and notice of change of ownership was given to the superior. Were the representatives of the original feuar liable to the superior in either case for feu-duties becoming due after the purchaser's infeftment, and the notice by him to the superior?

4. What is the irritancy *ob non solutum canonem*? Until when can

this irritancy now be purged? What is the effect of such a decree as regards sub-feus?

5. Describe the ceremony by which infeftment was, before 1845, given upon the grounds of feudal subjects disponed. Who were present at the ceremony? Sketch the Instrument of Sasine which was the evidence of the infeftment. Could such an instrument be recorded at any time in the Sasine Register?

6. By what Statute was the Warrant of Registration introduced? Give the Warrant in its original form.

7. What were the changes on the Sasine Registers introduced by the Land Registers Act, 1868, and what was the consequent alteration on the form of Warrant of Registration?

8. What was the original purpose of a decree of Special Service (formerly called a Retour)? What further qualities have been conferred by legislation on a decree of Special Service?

9. Enumerate the essentials necessary to be contained in a Deed of Strict Entail, under the Act 1685, and state the steps requisite to give such a deed complete effect.

10. How do Trustees under a Trust-Disposition and Settlement, containing a General Conveyance of Lands, make up their Title in the case—

(*a*) Where the granter of the Trust-Disposition and Settlement was infeft? and

(*b*) Where he was not infeft?

11. What are the methods by which a security can be obtained over Heritable Estate in Scotland for future advances? State which heritable creditor's remedy is not available when one of these methods is adopted, and give the reason.

12. A. became Heir of Entail in possession of an Entailed Estate, but survived his succession for only fourteen days, and had not time to make up a title to the Estate. He granted a security over the Estate in the shape of a Bond of Provision, under the Aberdeen Act, in favour of his wife. Was the bond effectual? State the ground of your answer.

13. Enumerate the methods by which the heir of a creditor who has died intestate, in right of a bond and disposition in security from which executors have been excluded, can now (1892) make up his title.

14. What is the writing by which a heritable creditor intimates to his debtor that payment is required of the debt; and that if payment is not made at the expiry of three months, the creditor will proceed to sell the lands? How is this writing intimated? Where is it intimated (*a*) when the debtor is in Scotland, (*b*) when he is furth thereof? Can the creditor, who has recourse to this remedy against the lands, at the same time give the debtor a charge under the personal obligation and consent to registration for preservation and execution, contained in the bond and disposition in security?

15. State the purpose and effect of the diligence of inhibition? How

is an inhibition now served and recorded? What changes on the law of inhibition were made (*a*) by the Consolidation Act, and (*b*) by the Conveyancing Act?

MEDICAL JURISPRUDENCE.

Wednesday, 6th July 1892.—3 *to* 5 *o'clock.*

I.—*Corrosive Poisons.*

Distinguish between a corrosive and an irritant poison. Give, without entering into details, an example of each.

II.—*Wounds.*

(*a*) What is the great danger in incised wounds?

(*b*) Why does the wound not correspond with the weapon inflicting it?

(*c*) Why may a punctured wound, *e.g.* a bayonet-thrust, look smaller than the weapon inflicting it?

III.—*Infanticide.*

State the proofs of live birth.

IV.—*Asphyxia.*

Describe the typical condition of the heart as ascertained *post-mortem* in a case of Asphyxia.

V.—*Testamentary Capacity.*

What observations require to be produced in evidence that a testator is of disposing mind?

PUBLIC LAW.

Thursday, 7th July 1892.—10 *to* 2 *o'clock.*

(*Six Questions in each group will suffice.*)

I.—*Natural Law.*

1. What does the Philosophy of Law profess to do? By what other names is it known? Can you distinguish it from Ethics?

2. Explain the relation in which Natural Law stands to Positive Law. In what different senses have the two terms been used?

3. What did "Nature" signify to Aristotle, Grotius, Hobbes, and Rousseau respectively?

4. Criticise Austin's conception of Sovereignty.

5. In what different ways has the distinction between Law and Morality been expressed?

6. Give some account of, and criticise the doctrines of either (*a*) the Theological School, or (*b*) the Historical School.

7. Discuss the Roman precept, "*Jus suum cuique tribuere*" (the relations of Justice and Charity).

8. What are the secondary sources of Positive Law?

9. What is "a Right"?

II.—*Public International Law.*

1. What objections have been taken to the title "International Law"?

2. Discuss "Treaties" as a source of International Law.

3. Who are the "Precursors of Grotius"? Give some account of their writings.

4. Criticise the doctrine that all States are equal.

5. How are diplomatic agents classified? By what Treaties was their classification settled?

6. Trace the development of the Law of Occupancy.

7. "In the case of Intervention, as in that of Revolution, its essence is illegality." Examine this statement.

8. What are the effects of War upon—

   (*a*) Treaties previously concluded between the belligerents?

   (*b*) Trade between the subjects of the belligerents?

9. State the rules of the Consolato del Mare and the Declaration of Paris, 1856, with respect to enemy goods on neutral vessels, and neutral goods on enemy vessels. Discuss the right of maritime capture.

POLITICAL ECONOMY.

Wednesday, *6th July* 1892.—10 *to* 2 *o'clock.*

(*Answer Twelve Questions.*)

1. Explain carefully the meaning of the term "law" as used in political economy. Illustrate by reference to the laws of the production and the distribution of wealth.

2. What are the economic arguments in favour of the institution of private property? Consider their applicability to (*a*) copyright, (*b*) patents.

3. Examine the proposal to restrict the output of coal with the view of raising the wages of labour.

4. Why are customs and excise duties generally not suitable for local taxation?

5. What principles should govern the taxation of transfers of property (*a*) *inter vivos*, (*b*) after death?

6. Examine the meaning of freedom of contract with reference to the doctrine of *Laissez-faire.*

7. Would the adoption of the "free coinage of silver" by the United States raise the gold price of the rupee? Explain accurately the phrase "free coinage."

8. Compare and contrast "personal" and "material" capital. What were the views of Adam Smith on the distinction?

9. Give a critical analysis of "the unearned increment of land." Point out any analogies in other forms of wealth, and notice any differences you consider essential.

10. What are the advantages of production on a large scale in manufactures? What is the "Law of Increasing Return"?

11. What are the chief advantages and disadvantages of Joint-Stock Companies? Examine the case of the acquisition of land in new countries.

12. "The interest of the inland dealer in corn and that of the great body of the people are, even in years of the greatest scarcity, exactly the same."—*Adam Smith.* Examine this statement critically.

13. Examine "State Socialism" with reference to (*a*) the maximum freedom of individuals; (*b*) the greatest happiness of the greatest number.

14. Why has the rate of interest on first-class securities fallen in recent years?

15. Notice the *economic* principles of *Poor Relief* with special reference to the proposal for old-age pensions.

Graduates in Law.[1]

DEGREE OF LL.B., 1889-1893.

1889.

David Anderson, M.A.
Claud Patrick Boswell, M.A.
Archibald Brown Campbell, M.A.
*Andrew Henderson Briggs Constable, M.A.
*Alistair Davidson, M.A.
*Matthew Robin Greenlees, M.A.
James Arthur Hope, M.A.
*William Hunter, M.A.
*Robert Bird Kerr, M.A.
Francis Kinloch, B.A.
*George Fleming Mathers, M.A.
*John Hepburn Millar, M.A.
*Charles David Murray, M.A.
*Coventry Dick Peddie, M.A.
John Ritchie, M.A.
*Hamish Hay Stuart, M.A.
Arthur Moodie Thomas, M.A.
*Alexander Thomson, M.A.

1890.

*Duncan Mearns Abel, M.A.
*James Roberton Christie, M.A., LL.B. (Glasg.).
*William Scott Currie, M.A.
Edmund John Gunn, M.A.
Neil James Kennedy, B.A.
William James Kippen, B.A.

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[1] The names of all the Graduates in Law from the institution of the Degrees to 1888 will be found in the List of Graduates of the University, published in 1889, pp. 125-127. See also previous Calendars.

* Passed with distinction. "Distinction" was instituted in October 1885. Several of the Graduates of 1885-88 passed part of their Examinations before any record of distinction was preserved.

Lawrence M'Laren, M.A.
John Liddell Officer, M.A.
Alexander David Russell, M.A.
*William Thomson, M.A.

1891.

Andrew Brown, M.A.
Charles Walker Bruce, M.A.
Robert Jeffrey Cunningham, M.A.
James Wright Forbes, M.A.
Henry William Gibson, M.A.
Alexander Gray, M.A.
William Gray, M.A.
*James Mercer Irvine, B.Sc.
*Erskine Dawson Jamieson, M.A.
*Thomas Johnston, M.A.
Robert Carmichael Malcolm, M.A.
*Thomas Brash Morison, M.A.
C. Morrison, M.A.
*Andrew Fleming Smith, M.A.
James Robert Earl Monteith Smith, M.A.
Michael Smith, M.A.
*Robert Macaulay Smith, M.A.
Frederick Mills Spankie, M.A.
Alex. Arthur Granger-Stewart, M.A.
*Robert Moir Williamson, M.A.
John Buchanan Young, M.A.

14th April 1892.

William Brown, M.A.
*John Sproat Taylor Cameron, M.A.
Augustus Wallace M'Gregor, M.A.

1st August.

James Barty, M.A.
*William Chree, M.A.
John Marr Davidson, M.A.
*James Grant, M.A.
Thomas John Millar, M.A.
Alexander John Raeburn, M.A.

13th April, 1893.

Thomas Sanderson Hepburn Burns, M.A.
*William Findlay, M.A.
John Peregrine Robertson White, M.A.

DEGREE OF B.L.

1889.

*Robert Liddell Cockburn.
William Stowell Haldane.
John Lumsden Macpherson, M.A.
John Glover
John James Waugh

1890.

Duncan Cameron
Duncan Archibald Maccoll.
Robert Watson.

1891.

John Scrymgeour Hepburn.
John Nisbet.
William Alexander Stewart
Thomas Trotter.

28th January 1893.

Thomas Edward Taylor, M.A.

DEGREE OF DOCTOR OF LAWS (LL.D.).[1]

The Degree of Doctor of Laws is conferred *honoris causâ tantum*. It was first granted in 1695. Previously to 1751 it had been conferred on seven persons only. Since then more than 400 names, including some of the most distinguished in Europe, have been added to the list. The degree is not conferred in absence except in very special cases.

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* Passed with distinction. See note 2 on previous page.

[1] Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent Ceremonial, on giving at least a week's notice.

The following is a list of those upon whom the Degree of Doctor of Laws has been conferred in 1889-1893 : —[2]

1889.

[3] Sir Syed Ahmed Khan, Bahadûr, K.C.S.I.
J. E. T. Aitchison, C.I.E., M.D., F.R.S., &c.
[3 4] James D. Dana.
[3] Francis Day, C.I.E., &c.
[3] Hon. David Dudley Field
[3 4] C. Gegenbaur.
[3 4] E. Haeckel.
[3] Rudolf von Jhering, Dr. Jur.
[3 4] E. E. Kummer.
William Mackintosh, M.A., Q.C.
[3 4] Konrad Maurer.
Maurice Paterson, B.A.
Richard Quain, M.D., F.R.S., &c.
[3] Rudolf von Roth, Ph.D.
[3 4] Barthélemy St. Hilaire.
[3 4] Jules Simon.
Whitley Stokes, C.S.I., C.I.E., D.C.L., &c.
[3 4] Geheimrath Heinrich von Sybel.
James Ward, M.A., D.Sc.
[3] William Dwight Whitney
[3 4] B. Windscheid.

1890.

Sir Benjamin Baker, C.E.
Pierre Paul Leroy-Beaulieu.
Right Hon. Henry Chaplin, M.P.
Sir Dyce Duckworth, M.D.
Sir John Fowler, Bart., C.E.
[3] James Anthony Froude, M.A., LL.D.
Joseph H. Gilbert, M.A., Ph.D., LL.D., F.R.S.
William W. Goodwin, D.C.L.
James Hardy.
Sir John Kirk, M.D., G.C.M.G.
General Robert Maclagan, R.E.
John Marshall, M.A.
Right Hon. J. P. B. Robertson, M.P.
Frederic Seebohm, F.S.A.
[3] Emeritus-Professor C. Piazzi Smyth, F.R.A.S., &c.
H. M. Stanley.
Spencer Walpole.

1891.

Alexander Asher, Q.C., M.P., &c.
John Beddoe, M.D., F.R.S, &c., &c.
Major C. R. Conder, R.E., D.C.L.
Felix Dahn.
Alexander Campbell Fraser, D.C.L., LL.D.
Cunningham Geikie, D.D.
George Joachim Goschen, M.P.
Sir George Murray Humphry, M.D., F.R.S.
Colonel Sir Colin Campbell Scott Moncrieff, K.C.M.G., C.S.I.
Professor Simon Newcomb.
Sir Herbert Stanley Oakeley, M.A., Mus. Doc., LL.D., D.C.L.
John Johnstone Rogerson, B.A., LL.B.

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[2] The names of those who received the Degree prior to 1859 will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University of Edinburgh since its foundation," published in 1858, and of those who received the Degree from 1859 to 1888, both years included, in the List of Graduates published in 1889, and in previous Calendars.

[3] Conferred *in absentia*.

[4] Tercentenary Graduates unable to be present in 1884.

14th April 1892.

Robert M. Ferguson, Ph.D., F.R.S.E.

Rt. Hon. Sir Edward Fry.

[1] Theodore Nöeldeke.

Hon. Sir Charles Tupper, Bart., G.C.M.G., C.B., M.D.

[1] Rev. C. V. A. Van Dyck, M.D., D.D.

Rev. Thomas Walker, M.A., Professor of Logic and English Literature, Stellenbosch, Cape Colony.

[1] Robert Boog Watson, B.A., F.R.S.E.

1st August.

Surgeon-General James Macnabb Cuningham, M.D., &c.

Dr Jakob Schipper, Professor of English Philology, University of Vienna.

13th April 1893.

Sir I. Lowthian Bell, Bart., F.R.S.

Sir George Buchanan, M.D., F.R.S.

Alfred Marshall, M.A., Professor of Political Economy, University, Cambridge.

John Rhys, M.A., Professor of Celtic, University, Oxford.

Lieut.-Col. Justin C. Ross, C.M.G.

Rev. Walter C. Smith, D.D.

Alexander Moody Stuart, Professor of Roman Law and Law of Scotland, University, Glasgow.

Ramsay Heatley Traquair, M.D., F.R.S.

APPLICATIONS FOR SCHOLARSHIPS AND BURSARIES.

Candidates for a Vans Dunlop Scholarship must enter their names and addresses *at least a fortnight* before the date of examination, at the *Matriculation Office*, *University*, *Edinburgh*, and produce evidence that they are eligible. They are required to be matriculated students of the year in which the competition takes place.

Candidates for Bursaries, &c., must enter their names and addresses at the *Matriculation Office*, and exhibit the necessary certificates at least one week before the date of the competition.

The examination for first year Bursaries is in Latin and Moral Philosophy. Applicants for the second and third year Grierson Bursaries must apply on or before 15th October, and must state what distinctions they have attained in the Law Classes of the previous year.

Applications for grants from the William Dickson Travelling Fund must be lodged on or before 15th March.

Where the competition is open to Graduates, their standing will be computed from the date of the Graduation Ceremonial immediately following the completion of their Law Examinations.

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[1] Conferred *in absentia*.

I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1873	The Grierson Trustees.	80 0 0	3	1	About 26 13 4	Senatus.
II.	1873	Geo. Cairns, Solicitor.	18 19 4	1	1	About 18 19 4	Senatus.
III.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.

I. There are three Grierson Bursaries, each of the value of £26, 13s. 4d. annually. Deserving students from the parishes of Crawford or Leadhills, applying to the Clerk of Senatus on or before the 1st day of October, are entitled to preference, if they satisfy certain conditions;[1] and if the applicant is commencing his first Winter Session of the Law Curriculum he will be entitled to hold the Bursary for three years, provided " he prosecutes his studies with proper diligence."[1] The subjects of examination are Elementary Latin, English, and Arithmetic. See Time-Table of Examinations, pages 122 and 123.

Failing preferential candidates, the Bursaries will be tenable for one year only, and will be awarded to candidates who have attended one year in the Faculty of Arts in some University, and have applied as above-mentioned to the Secretary of the Senatus. 1. In the case of those commencing their first Winter Session in Law, the award will be to the candidate who has passed highest in Latin and Moral Philosophy at the Arts Graduation examination in October. 2. In the case of candidates commencing their second Winter Session—to the most distinguished law-student of that standing, who, if not a Graduate in Arts, has passed satisfactorily in Latin and Moral Philosophy at the Arts Examination, either in October or earlier. 3. In the case of candidates commencing the third Winter Session of the Law Curriculum—to the most distinguished law-student of that standing who has passed satisfactorily in Latin, Moral Philosophy, and Logic at the Arts Examination in October or earlier. See Regulations, CALENDAR 1877-78, p. 370. *Bursars in* 1892—First year, *A. C. M. Bell.* Second year, *David Moffat* (Preferental Candidate). Third year, *A. D. Donald.*

II. The competition for the Cairns Bursary, which is tenable for one year only, and is not subject to any preferences, is subject to the same conditions as those for the second year Grierson Bursary. This Bursary is open to Students who have completed one year in the Law Faculty. *Bursar*—1893, *Charles Lippe.*

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[1] See Calendar 1877-78, p. 370. By "proper diligence" is understood regular attendance on Classes, and on Class Examinations with reasonable proficiency.

III. For the *Thomson Bursaries* application should be made to Messrs Traquair, Dickson, & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, are preferred. The Examination is in Latin and Moral Philosophy, and is the same as the October Examinations in those subjects for M.A. See CALENDAR 1879-80, p. 345. *Bursars*—1889, *Robert Munro, M.A.* 1890. *F. J. Thomson, M.A.* (Preferential Candidate). 1891, *Alexander M'Callum.* 1892, *Robert Macfie.*

Bursaries gained in the Faculty of Arts, the holders of which may study in the Faculty of Law. See under Faculty of Arts.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1809	Dr Donald Grant, London.	£180 0 0	2	4	£90 0 0	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal and Two Professors.
III.	1871	The Sibbald Bursaries.	About 150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
IV.	1883	Wm. Renton, Edinburgh.	19 19 6	1	1	19 19 6	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
V.	1886	R. Allan, Feuar, Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
VI.	1889	Daniel MacLaurin, London.	70 0 0	1	4	70 0 0	Town Council.

II.—VANS DUNLOP LAW SCHOLARSHIPS.

For GENERAL REGULATIONS, see pages 273 and 366.

There are Four Vans Dunlop Scholarships, each of the value of about £100 per annum, and tenable for three years, more or less directly connected with the Faculty of Law:—

I. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law*, for which both Law and Arts Students are eligible.

Next vacancy in November 1895.
See Scholarships in Arts (XXXI., p. 275).

Scholars—1888, A. H. Briggs Constable, M.A.; *proxime accessit*—J. M. Irvine, M.A., B.Sc. 1891, No award. 1892, *Cameron Morrison*, LL.B. *Prox. accesserunt*—*J. R. Christie*, LL.B.; *A. B. Clark*, M.A.

II. *Vans Dunlop Scholarship in the Law of Nature and Nations, Civil Law, and Constitutional Law and History.*

(*a.*) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in the three subjects of examination for the Scholarship: provided they have written papers of the LL.B. standard at the Graduation Examination, and have obtained an average of not less than 75 per cent. of marks in these subjects.

(*b.*) The Competition is by written Essays on branches of law to be announced at least one year before the date of competition. The precise subject of each of the essays will be set on the conclusion of the Graduation Examination in October.

(*c.*) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.
Next vacancy in November 1895.
Each holder will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

Scholars 1889, J. M. Irvine, M.A., B.Sc. 1892, *J. S. Taylor Cameron*, LL.B.; *prox. accesserunt*—*William Chree*, LL.B.; *Alexander Thomson*, LL.B.

III. *Vans Dunlop Scholarship in Scots Law and Conveyancing.*

(*a.*) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in Scots Law, Conveyancing, and Medical Jurisprudence: provided they have obtained at the Graduation Examination an average of not less than 75 per cent. of marks in these three subjects.

(*b.*) The Competition is by written Essays on (1) the Civil Law of Scotland; (2) the Criminal Law of Scotland; and (3) Conveyancing, the particular branches of which will be announced at least one year before the date of competition. The precise subject of each essay will be set on the conclusion of the Graduation Examination in October 1893.

(*c*.) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in November 1893.

Each holder will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

Scholars—1890, *William Hunter, M.A., LL.B.*

IV. *Vans Dunlop Scholarship in History.*

Next vacancy in October 1895.

See Scholarships in Faculty of Arts (XXXVI., p. 276).

1889. D. P. Heatley. 1892. John Linton, M.A.	*Prox. accesserunt*—J. E. Pickles, W. B. Stevenson, M.A.

V. *The Lorimer Travelling Scholarship.*

The Lorimer Travelling Scholarship, of the annual value of about £50, tenable for two years, for the encouragement of the study of the "Law of Nature and Nations" in foreign Law Schools by Students and Graduates in the Faculty of Law, was founded by the Lorimer Memorial Committee, and the Association for the better Endowment of the University. The Scholarship is open to Candidates who, during the two years immediately preceding that in which a scholar falls to be appointed, has completed the examinations for any Degree in Law in the University in the following subjects, namely—(1) The "Law of Nature and Nations" (including therein the Philosophy of Law); (2) The Civil Law; and (3) Either (*a*) Constitutional Law and History, or (*b*) Political Economy. The foreign Law School or Schools which the Scholar proposes to attend must be previously approved by the Faculty of Law. The Candidate who, in the opinion of the Faculty of Law, passes with most distinction in the Examinations for Graduation in Law, in the subjects above set forth, during the two years immediately preceding the election, and who is willing to fulfil the conditions imposed by the Deed of Foundation, will be eligible, consideration being always given to his proficiency in the first of the above-named subjects, and to his knowledge of the modern language or languages spoken in the Law School or Schools where he proposes to study. For Deed of Foundation, see CALENDAR for 1892-93, p. 538. The Scholarship may probably be open for Competition in 1895.

III.—WILLIAM DICKSON TRAVELLING FUND.

This fund is for the purpose of assisting Graduates of any Faculty of not more than three years' standing to travel for the purposes of study or research. For particulars, see page 280.

IV.—THE FORENSIC PRIZE.

This Prize, of the value of £10, founded in 1858 by the Forensic Society with the view of encouraging the study of Roman Law, is awarded either in July or in October, as may be found convenient. It can be competed for only by Students of the Civil Law Class during the preceding year. The Fund, amounting to about £280, is invested in the name of the Dean and Treasurer of the Faculty of Advocates and the Professors of Civil and Scots Law.

1888. A. M. Anderson, LL.B.
1889 { W. Hunter, LL.B. / J. M. Irvine, LL.B. } equal
1890 { Alex. Brown, LL.B. / T. B. Morison, LL.B. } equal
1891. Thomas C. Wade.
,, *Prox. acces.*—Robert Munro, M.A., and A. D. Donald.
1892. Charles Lippe, M.A. (Aber.).
Prox, acces.—C. R. Gillies Smith, M.A. (Edin.).

SCHOLARSHIPS, BURSARIES, AND PRIZES, &c., OPEN IN 1893-94.

I.—SCHOLARSHIPS.

No. III. of the above Scholarships will be offered for competition after the conclusion of the Graduation Examination in November 1893. The subjects of the Essays to be set for this Scholarship will be taken from the following branches of Law:—

(1.) "The Scottish Law of Succession and Trust."
(2.) "The Scottish Criminal Law."
(3.) "The System of Tenure and of Titles to Land in Scotland."

II.—BURSARIES.

The Subjects of Examination for first-year Bursaries are Latin and Moral Philosophy, and are the same as the October Examinations for M.A.

1, 2. *Two Grierson Bursaries* value £26, 13s. 4d. each, restricted in the first place to natives of the parishes of Crawford and Leadhills, and tenable for three years, whom failing they will be tenable for one year. One will be open to Students beginning their first Winter Session, and one to Students beginning their second Winter Session (see general rule as to application, *sup.*).

3. The *Cairns Bursary*, value £18, 19s. 6d., tenable for one year (see general rule, *sup.*).

4. The *Sibbald Bursaries*, each of the annual value of £30, and tenable for three years, are also tenable by Students in the Faculty of Law entering the University for the first time; see Bursaries (Arts) No. LI., p. 258.

5. A *Thomson Bursary*, of £25 a year, tenable for four years. Candidates must be Matriculated Students commencing their First Winter Session in the Faculty of Law, and must intimate their intention to compete to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, the Agents for Dr Thomson's Trustees, and also to the Clerk of the Senatus on or before 25th September. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries or the city of Edinburgh, are preferred.

6. *Renton Bursary* (see No. IV., p. 368).

7. *Jamieson Bursary* (see No. II., p. 368).

III.—PRIZES.

1. The *Forensic Prize* of £10 is awarded annually, either for the best Essay upon a subject prescribed by the Professor of Civil Law, or as the result of a special examination held either in July or October. It can be competed for only by Students who have attended the Civil Law Class during the preceding year. The subject of Essay or date of Examination, as the case may be, is announced by the Professor early in the session.

2. The *Muirhead Prize*, of about £17, 10s. annually, is awarded to the Student who gains the first place in the Class of Civil Law, as determined by the results of the periodical examinations during both the Winter and Summer Sessions.

3. The *William Dickson Travelling Fund* (see page 280).

4. The *Lord Rector's Prize* (see page 264).

5, 6, 7. *Three Gray Prizes* (see page 265).

JOHN KIRKPATRICK, LL.D.,
Dean of the Faculty of Law.

IV.

FACULTY OF MEDICINE.

1893-94.

Dean.

PROFESSOR THOMAS RICHARD FRASER, M.D., F.R.S.,

University New Buildings.

Programme of Classes.

FACULTY OF MEDICINE.

SUMMER SESSION, 1893.

The Classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.	
Elementary Botany.....	2 May, 8 o'clock	Prof. Bayley Balfour,	£4	4[1]
Practical Botany........ Field Demonstrations on *Saturdays.*	2 May, 9 ,,		2	2
Physics	2 May, 12 ,,	Prof. Tait, ...	3	3
Medical Jurisprudence and Public Health...	2 May, 10 ,,	Prof. Sir Douglas Maclagan,	4	4
Zoology (Elementary).	2 May, 1 ,,	Prof. Ewart,	4	4
Do. (Advanced)...	2 May, 3 ,,		2	2
Practical Zoology (Elementary)	2 May, ,,		2	2[2]
Do. (Advanced)...	3 May, 3 ,,		3	3[2]
Prac. Materia Medica (incl. Pharmacy).....	2 May, 10 ,,	Prof. Fraser,.......	3	3
Chemistry (Practical)..	2 May, 2 ,,	Prof. Crum Brown,	3	3
Do. (Organic).... Advanced Class — (*Tues., Wed., & Thur.*)	2 May, 1 ,,		2	2
Anatom. Demonstra.	2 May, 11 *daily.*	Prof. Sir W. Turner and Demonstrators,		
Practical Anatomy......	2 May, *daily.*		2	2
Anthropology— (*Tues., Wed., Fri.*)	9 May, 2 ,,		2	2[3]
Clinical Surgery, Royal Infirmary (*Mon. & Thurs.*)................	4 May, 12 ,,	Prof. Annandale,	3	3
Clinical Medicine, Royal Infirmary (*Tues. & Fri.*)	2 May, 12 to 2	Profs. Grainger Stewart, Fraser and Greenfield, and Prof. Simpson on Dis. of Women.	3	3
Clinical Instruction in the Royal Infirmary.	12 *daily.* . .	The Clinical Professors	Hospital Ticket.[4]	
Obstetrical and Gynecol. Operations— (*Tues. & Fri.*)	2 May, 10 o'clock	Prof. Simpson, ...	£3	3

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[1] Besides Garden Fee of 5s.
[2] Besides charge of 10s. for Laboratory Expenses.
[3] When taken with Practical Anatomy, £1, 1s.
[4] For Fees see page 378.

SUMMER SESSION—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Practical Physiology, including Histology....	2 May, 3 o'cl.	Prof. Rutherford,	£3 3
Operative Surgery and Surgical Appliances	10 April, 10[1] ,,	Prof. Chiene, ...	3 3
Practical Morbid Anatomy and Pathology	2 May, 11 ,,	Prof. Greenfield,...	3 3
		Lecturers.	
Mental Diseases, with Clinical Instruction at Morningside Asylum (*Mon. Wed. & Frid.*)	3 May, 3 o'clock	Thos. S. Clouston, M.D., ...	3 3[2]
Diseases of the Eye ...	2 May, 9 ,,	D. Argyll Robertson, M.D.,	3 3[2]
Clinical Instruction on Diseases of Children, at Royal Hospital for Sick Children......... (*Tues. and Sat.*)...	6 May, *Tues. and Sat.* 10.30.	James Carmichael, M.D., John Playfair, M.D., ...	1 1[2]

[1] Class meets during April at 10 A.M., and at 3 A.M. during May and June.

[2] Five Shillings University Entrance-Fee for Non-Matriculated Students.

WINTER SESSION, 1893-94.

The Classes in the Faculty of Medicine will be opened on Tuesday, 10*th October. They will meet daily* (*Saturdays excepted*), *unless otherwise stated.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Medicine	10 Oct., 9 o'cl.	Prof. G. Stewart,	£4 4
Chemistry	10 Oct., 10 ,,	Prof. Crum Brown	4 4
Practical Chemistry	4 Dec., 11 and 2 o'cl.		3 3
Surgery	10 Oct., 2 ,,	Prof. Chiene, ...	4 4
Physiology or Institutes of Medicine.	10 Oct., 10 ,,	Prof. Rutherford,	4 4
Practical Physiology	11 Oct., 1 ,,		3 3
Midwifery & Diseases of Women & Childr.	10 Oct., 10 ,,	Prof. Simpson, ...	4 4
Clinical Surgery—Royal Infirmary, *Mon. & Thurs.*	12 Oct., 12 ,,	Prof. Annandale,	4 4

WINTER SESSION—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees,
Clinical Medicine—Royal Infirmary, *Tues. & Fri.* ...	10 Oct., 12-2 o'cl	Profs. G. Stewart, Fraser, and Greenfield, and Simpson on Diseases of Women,.........	£4 4
Clinical Instruction in the Royal Infirmary	12 *daily*. . .	The Clinical Professors.....	Hospital Ticket.[1]
Anatomy	10 Oct., 1 o'cl.	Prof. Sir William Turner, ...	£4 4
Practical Anatomy ...	2 Oct., *daily*		3 3
Anatom. Demonstr. ..	10 Oct., 4 o'cl.		2 2[2]
Materia Medica and Therapeutics	10 Oct., 2 ,,	Prof. Fraser,......	4 4
Pract. Mat. Medica, includ. Pharmacy	11 Oct., 10 ,,		3 3
Pathology	10 Oct., 3 ,,	Prof. Greenfield,	4 4
Practical Pathology...	10 Oct., *daily*		3 3
Zoology (Elementary)[3]	10 Oct., 12 o'cl.	Prof. Ewart, ...	4 4
Do. (Advanced)[3].	10 Oct., 3 ,,		2 2
Practical Zoology (Elementary)[3].......	10 Oct., 11 ,,		2 2[4]
Do. (Advanced)[3].	10 Oct., 1.30		3 3[4]
Physics[3].................	10 Oct., 3 ,, .	Prof. Tait,.........	3 3
Elementary Botany[3]..	10 Oct., 2.30	Prof. B. Balfour,	4 4
Prac. Bot. (Element.)[3]	10 Oct.,		2 2
Do. do. (Advanced)[3]	10 Oct., 11 ,,		3 3
Medical Jurisprudence and Public Health	*Given in Summer Session*	Prof. Sir Douglas Maclagan, ...	4 4
Public Health Lectures	26 Jan., 3 o'cl.	Prof. Sir Douglas Maclagan, ...	0 0[5]

		Lecturer.	
Mental Diseases........	*Given in Summer Session*	T. S. Clouston, M.D., ...	3 3[6]

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[1] For Fees see page 378.
[2] When taken along with Practical Anatomy, £1, 1s.
[3] Three Months' Course.
[4] Besides charge of 10s. for Laboratory Expenses.
[5] Open to Members of Medical Jurisprudence Class, 1893.
[6] Five Shillings University Entrance-Fee.

WINTER SESSION—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Lecturers.	Class Fees.
Diseases of the Eye...	*Given in Summer Session*	D. Argyll Robertson, M.D.	3 3[1]
Clinical Instruction on Diseases of Children	14 Oct., 9.30 o'cl.	Jas. Carmichael, M.D., John Playfair, M.D.,	1 1[1]
Compar. Embryology	10 Jan. 2 ,,	Mr George Brook,	3 3[1]

The Fee for a Second Course of any of the Lectures is £3, 3s.; any subsequent course is free. If a Perpetual Ticket is taken out at the beginning of the First Course, the Fee is £6, 6s.

ROYAL INFIRMARY.

Royal Infirmary at Twelve *daily.*—Perpetual Ticket, in one payment, £12; Annual Ticket, £6, 6s.; Six Months, £4, 4s.; Three Months, £2, 2s. Separate payments, amounting to £12, 12s., entitle to a Perpetual Ticket.

MATRICULATION FEES.

For the Academical Year, 1st October to 1st October, .	£1 0 0
For the Summer Session only, 1st May to 1st October, .	0 10 0
University entrance-fee in lieu of Matriculation for each of certain additional Courses (see Class-Lists), . .	0 5 0

CLASS SESSIONS.

There are Two Sessions in each year, viz.:—

I. The Summer Session, which opens on the 2nd May and closes on the 21st of July 1893.

II. The Winter Session, which opens on the 10th October 1893, and closes on the 22nd of March 1894. Practical Anatomy and Public Health Laboratory work begin on the 2nd of October 1893.

The Classes will meet for the last time before the Christmas Vacation on Friday, 22nd December 1893, and will reassemble on Tuesday, 9th January 1894.

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[1] Five Shillings University Entrance-Fee for Non-Matriculated Students.

LABORATORIES.

The Physical Laboratory, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

Royal Botanic Garden and Botanical Museum and Laboratory.—These, as well as the Herbarium, with which is incorporated the Collection of dried plants belonging to the University, are used by University Students for the practical study of plants and for botanical research, and are open daily, under the superintendence of the Professor, assisted by James Adam Terras, B.Sc., and others.

Physiological Laboratory, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by E. W. Carlier, M.D., C.M., B.Sc., and Gustav Mann, M.B., C.M.

Practice of Physic Laboratory, for the study of Medicine, and for research in connection with the Practice of Physic, open daily, under the superintendence of the Professor, assisted by Robert A. Fleming, M.A., M.B., C.M.

Dissecting Rooms, open daily under the superintendence of Professor Sir William Turner, assisted by David Hepburn, M.D.; James Musgrove, M.D.; and other assistants. Open 2nd October 1893.

The Chemical Laboratories (distinct from the Practical Chemistry Room), completed in 1885, contain accommodation for forty Students. The Laboratories are fitted with all necessary apparatus for chemical analysis and research, open daily, under the superintendence of the Professor, assisted by Leonard Dobbin, Ph.D.; Hugh Marshall, D.Sc., and Theodore Rettie, B.Sc.

Obstetrical and Gynecological Laboratory, for research and study of practical work, under the superintendence of the Professor, assisted by J. Clarence Webster, B.A., M.D.

Tutorial Class of Clinical Medicine, in the Wards of the Royal Infirmary, by Joseph Tillie, M.D.; W. Gordon W. Sanders, M.B., C.M.; Robert A. Fleming, M.A., M.B., C.M.; under the superintendence of the Clinical Professors.

Natural History Laboratories, for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, M.Sc., Ph.D.[1]

Materia Medica Laboratories, for the study of Practical Materia Medica and Practical Pharmacy, and for Pharmacological and Pharmaceutical research, open daily, under the superintendence of the Professor, assisted by Joseph Tillie, M.D., and William C. Sillar, M.B., C.M., B.Sc.

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[1] Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

TUTORIAL CLASS OF CLINICAL SURGERY AND SURGICAL PATHOLOGY, in the Infirmary, by A. Logan Turner, M.B., C.M., and the Resident Surgeons, under the superintendence of the Clinical Professor.

PUBLIC HEALTH LABORATORY, for Hygienic investigation, comprises three departments, viz. : a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of the Professor, assisted by Charles Hunter Stewart, M.B , C.M., B.Sc. Opens 2nd October 1893.[1]

SURGICAL LABORATORY, divided into two parts—(*a*) General Surgical Pathology, (*b*) Bacteriology,—is utilised for teaching Systematic Surgery, and every facility is afforded for investigation, under the superintendence of the Professor, assisted by David Wallace, M.B., C.M. ; Harold J. Stiles, M.B., C.M. ; Alfred Duke, M.B., C.M., and Ernest G. Fortune, M.B., C.M.

PATHOLOGICAL LABORATORY, for the study of Pathological Anatomy and for Pathological Research, including Histological and Bacteriological Departments, under the superintendence of the Professor, assisted by Robert Muir, M.A., M.D., and David Stuart, M.B., C.M.

EMBRYOLOGICAL LABORATORY, for research and for study of the development of Vertebrate and Invertebrate Types, open daily under the superintendence of the Lecturer.

THE ROYAL EDINBURGH ASYLUM is open to members of the Class of Mental Diseases for Practical Instruction, under the superintendence of the chief Physician.

MINIMUM CURRICULUM FOR THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY, WITH SUGGESTED ORDER OF STUDY AND EXAMINATION.

Before beginning Medical Study, all students must pass the Preliminary Examination in General Education, either at the University, or, if elsewhere, according to the requirements of the University. Immediately after entering on Medical Study, students must register in the books of one or other of the Registrars of the General Medical Council. The Registrar for Scotland is James Robertson, 1 George Square, Edinburgh, from whom forms of Registration and all information on the subject may be obtained.

Medical Study may be begun either in October (Winter Session) or May (Summer Session), and must be engaged in for at least five years.

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[1] Fees—Winter Session, £10, 10s. ; Summer Session, £6, 6s.

A.—*For Students beginning in Winter.*

FIRST WINTER SESSION.
- Chemistry, including Practical Chemistry.
- Physics,[1] or Elementary Zoology.
- Anatomy (Lectures).
- *Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology.*

FIRST SUMMER SESSION.
- Elementary Zoology or Physics.[1]
- Elementary Botany.
- *Examination in Elementary Botany and Elementary Zoology or Physics.*

SECOND WINTER SESSION.
- Practical Anatomy.
- Physiology.
- Surgery.

SECOND SUMMER SESSION.
- Practical Physiology.
- Practical Materia Medica.
- Clinical Surgery (with Dressership).
- Hospital.

THIRD WINTER SESSION.
- Materia Medica.
- Practical Anatomy.
- Clinical Surgery (with Dressership).
- Hospital.
- *Examination in Anatomy, Physiology, and Materia Medica and Therapeutics* (the last may be postponed to the end of the following summer).

THIRD SUMMER SESSION.
- Practical Pathology.
- Medical Jurisprudence and Public Health.
- Clinical Medicine.
- Hospital.
- *Examination in Materia Medica and Therapeutics* (if not previously taken).

FOURTH WINTER SESSION.
- Pathology.
- Medicine.
- Midwifery and Diseases of Women and Children.
- Clinical Medicine (with Clerkship).
- Hospital.
- *Examination in Pathology, and in Medical Jurisprudence and Public Health* (the latter may be postponed to the end of the following summer).

FOURTH SUMMER SESSION.
- *Examination in Medical Jurisprudence and Public Health* (if not previously taken).

FOURTH SUMMER AND FIFTH WINTER SESSION.
- Clinical Medicine.
- Clinical Surgery.
- Mental Diseases.
- Ophthalmology.
- Post-mortem Examinations.
- Fevers.
- Diseases of Children.
- Out-practice of an Hospital, Dispensary, &c.
- Midwifery Cases and Practice
- Vaccination.
- Hospital.

FIFTH SUMMER SESSION.
- *Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.*

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[1] Three months' course.

B.—*For Students beginning in Summer.*

FIRST SUMMER SESSION.
- Elementary Botany.
- Elementary Zoology or Physics.[1]
- *Examination in Elementary Botany, with either Physics or Elementary Zoology.*

FIRST WINTER SESSION.
- Chemistry, including Practical Chemistry.
- Elementary Zoology or Physics.[1]
- Anatomy (Lectures).
- *Examination in Chemistry, including Practical Chemistry and either Elementary Zoology or Physics.*

SECOND SUMMER SESSION.
- Practical Anatomy.
- Practical Physiology.

SECOND WINTER SESSION.
- Physiology.
- Surgery.
- Practical Anatomy.

THIRD SUMMER SESSION.
- Practical Anatomy.
- Practical Materia Medica.
- Clinical Surgery (with Dressership).
- Hospital.

THIRD WINTER SESSION.
- Practical Anatomy.
- Materia Medica.
- Clinical Surgery (with Dressership).
- Hospital.
- *Examination in Anatomy, Physiology, and Materia Medica and Therapeutics* (the last may be postponed to the end of the following summer).

FOURTH SUMMER SESSION.
- Practical Pathology.
- Medical Jurisprudence and Public Health.
- Clinical Medicine.
- Hospital.
- *Examination in Materia Medica and Therapeutics* (if not previously taken).

FOURTH WINTER SESSION.
- Pathology.
- Medicine.
- Midwifery and Diseases of Women and Children.
- Clinical Medicine (with Clerkship).
- Hospital.
- *Examination in Pathology, and in Medical Jurisprudence and Public Health* (the latter may be postponed to the end of the following summer).

FIFTH SUMMER SESSION.
- *Examination in Medical Jurisprudence and Public Health* (if not previously taken).

FIFTH SUMMER AND FIFTH WINTER SESSION.
- Clinical Medicine.
- Clinical Surgery.
- Mental Diseases.
- Ophthalmology.
- Post-mortem Examinations.
- Fevers.
- Diseases of Children.
- Out-Practice of an Hospital, Dispensary, &c.
- Midwifery Cases and Practice.
- Vaccination.
- Hospital.
- *Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine and Midwifery.*

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[1] Three months' course.

Courses of Lectures, &c.

1893-1894.

I. BOTANY.

PROFESSOR BAYLEY BALFOUR.

Summer Session.

1. LECTURES.—The course is a general one—Morphological, Physiological, and Systematic—illustrated by diagrams, models, and fresh specimens, and by demonstrations of microscopic specimens. Lectures are given every Monday, Tuesday, Wednesday, Thursday, and Friday. In addition, lectures on special parts of the subject are given at intervals during the Session.

2. PRACTICAL CLASS.—In this class opportunity is given for the examination of microscopic structure of plants, and for the study of life-histories of plants illustrating the lectures. They are conducted by the Professor, and Assistants.

3. EXCURSIONS. — Excursions are made on Saturdays for the practical study of plants in the fields.

Winter Session.

1. LECTURES.—A three months' course of lectures similar to that of the Summer Session is given.

2. PRACTICAL CLASS. — A class similar to that of the Summer Session is conducted by the Professor and Assistants.

The Royal Botanic Garden, with the Botanical Museum and Herbarium, are open daily for the examination of living as well as preserved specimens of plants.

II. NATURAL HISTORY.

PROFESSOR EWART.

1. LECTURES ON ZOOLOGY.

Summer Session.

The first part of the course will treat of the Principles of Biology as illustrated by the Life-History, Morphology, and Physiology of one of the Vertebrata. The Distinctive Characters of the Chordata, and the structure, habits, &c., of a series of vertebrate types will next be considered. The rest of the course will be chiefly devoted to a consideration of (1.) The various Invertebrate Groups, the leading types of which will be described in detail. (2.) The structure and life-history of the more important animal parasites, and (3.) The Embryology, Classification and Geographical Distribution of Animals.

Winter Session.

The course of lectures in winter will deal with the same subjects as the Summer Course.

2. ELEMENTARY PRACTICAL ZOOLOGY.

Summer and Winter Sessions.

In this Class Students have the opportunity of studying practically the more important types described in the Lectures, amongst others :—Amœba, Paramœcium, Hydra, Distoma, Hirudo, Arenicola, Anodonta, Helix, Astacus, Periplaneta, Raia, Clupea, Rana, Columba, and Lepus.

3. ADVANCED CLASS.

Summer and Winter Sessions.

This Class is especially intended to assist Students in their preparation for the Second B.Sc. in Zoology.

During the Summer Session an account will be given of the Comparative Morphology of the chief systems of organs of the Invertebrata, more especially of the nervous, reproductive, locomotor, and excretory systems, and also of the phenomena of Reproduction in the Protozoa and Metazoa.

The Winter Course will be devoted to the Comparative Morphology of the Vertebrata, the nervous system and its sense organs, electrical and luminous organs and the genito-urinary system receiving particular attention.

As far as time permits the present position of the question as to the morphological nature of the vertebrate head and skeleton will be discussed.

In both courses the principles which form the scientific basis of Comparative Morphology will be placed prominently before the student, and an account will also be given of the progress of Scientific Research, and the more important recent discoveries will be described. The class will meet at least three times each week during the Summer Session and during the first half of the Winter Session.

LABORATORY WORK.

The Laboratory will be open during the Summer and the first half of the Winter Sessions for the dissection and microscopic examination of a series of invertebrate and vertebrate types, and for the acquiring of a practical acquaintance with the methods of research.

RESEARCH WORK.

The Laboratories will also be available during both Sessions for research. Students desiring to be admitted for this purpose should apply to the Professor. No Laboratory fees will be charged for such Students.

III. CHEMISTRY.

PROFESSOR CRUM BROWN.

1. LECTURES—

In the Lectures the general laws of chemical action are explained and illustrated.

The chief non-metallic elements and their more important compounds are discussed in detail. The metals and the different series of metallic salts are considered more generally, details being given in the case of the more important substances.

The principles upon which the classification of organic substances is based are explained, and the properties of the chief groups illustrated by means of examples.

Tutorial Classes, meeting once a week, are conducted by Dr Dobbin.

Text-Book.—Wurtz, "Elements of Modern Chemistry" by Greene.

A Class for Advanced Students is held in Summer. The subject for the Summer of 1893 will be Organic Chemistry.

2. LABORATORY.—The Laboratory is open for the reception of Students who desire to study Analytical Chemistry, or to undertake chemical investigations. The instruction in the Laboratory is given by the Professor, assisted by Dr Dobbin.

Attendance on this Course qualifies as "Practical Chemistry" for the First Professional Examination.

[For details in reference to the HOPE PRIZE, and Hope Prize Scholarship, which are attached to the Laboratory, and the ROBERT WILSON MEMORIAL PRIZE, which is attached to the Class of Chemistry, see under University Prizes in Faculty of Medicine.]

3. PRACTICAL CLASSES.—The work of these classes consists in the study of the reactions of the commoner Salts.

IV. PHYSICS.

PROFESSOR TAIT.

The subjects embraced in the Course of Physics are the following:—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

2. Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of time.

3. Sound, and Wave-propagation in general, Intensity, Pitch, and Quality of Musical Sounds, Harmonics, Concords, &c.

4. Heat, its Nature, Effects, Measurement, Transference, and Transformations—Measurement of Temperature and of Absolute Temperature ; Thermo-dynamics.

5. Light (1) Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision ; (2) Physical Optics, Interference, Dispersion, Diffraction, Double Refraction, Polarization, Spectrum Analysis.

6. Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto- Electricity, Electro-Dynamics, and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

V. ANATOMY.

PROFESSOR SIR WILLIAM TURNER.

Winter Courses.

1. LECTURES ON ANATOMY, at 1 P.M.—It is intended in this Course of Lectures to bring before the Student, in a systematic manner, the structure of the Human Body. The different systems and organs will be described, both in the more obvious arrangements and relations of parts which can be examined by the naked eye, and in their more minute or microscopic structure. The Course includes, therefore, both Textural or General Anatomy and Descriptive Anatomy. The Lectures are illustrated by recent dissections, by wet and dry preparations, by a large collection of Osteological specimens, and by drawings and diagrams. Structures too minute to be recognised by the naked eye are demonstrated under the Microscope.

To assist the Junior Members of the Lecture Class to acquire a knowledge of Osteology, Tutorial Demonstrations on the bones will be given during the earlier months of the Session without additional fee. All the members of this class have access to a systematically arranged series of osteological specimens and of models. Written examinations for both Junior and Senior Students are held periodically during the Session.

Text-Books — The Professor's "Introduction to Human Anatomy," along with Gray's "Anatomy," or with Wilson's "Anatomy." Quain's "Elements of Anatomy." Holden's "Osteology."

2. ANATOMICAL DEMONSTRATIONS, at 4 P.M.—In this Course, which is conducted in the Theatre, the structure of the human body is displayed and demonstrated topographically, from the surface inwards. The Professor and the Demonstrator, David Hepburn, M.D., will jointly conduct the Course.

3. PRACTICAL ANATOMY, under the superintendence of the Professor, aided by the Demonstrators, David Hepburn, M.D., C.M., James Musgrove, M.D., and by several other assistants. Examinations of both Junior and Senior Students on dissected parts are regularly conducted by the Demonstrators and the Professor. Special tutorial Demonstrations will also be given to the Senior Students on the joints, the brain, the organs of special sense, and other viscera.

This Course will commence on Monday, October 2nd. The Dissecting-rooms are open from 9 A.M. to 5 P.M., and on Saturdays from 9 A.M. to noon. The Mackenzie Bursaries are awarded to members of this Class for proficiency in dissection.

Text-Books. — "Demonstrations of Anatomy," by Ellis, or Heath's "Practical Anatomy," or Holden's "Manual of the Dissection of the Human Body," or Cunningham's "Dissector's Guide."

Summer Courses.

1. PRACTICAL ANATOMY, as in Winter. The Course will commence on Tuesday, 2nd May. The Rooms are open from 9 A.M. to 5 P.M.; on Saturdays from 9 A.M. to noon. Examina-

tions are regularly conducted on dissected parts by the Professor and by the Demonstrators, David Hepburn, M.D., C.M., James Musgrove, M.D., and other assistants, and the brain and organs of sense will be specially demonstrated.

2. ANATOMICAL DEMONSTRATIONS in the Theatre will commence on Tuesday, 2nd May, and will be given partly by the Professor, and partly by the Demonstrator, David Hepburn, M.D. This Course is open, without additional Fee, to those engaged in Practical Anatomy during the Summer, and will consist of demonstrations on some special departments of Anatomy.

VI. INSTITUTES OF MEDICINE OR PHYSIOLOGY.

PROFESSOR RUTHERFORD.

This Course, consisting of 100 Lectures, is held in the Winter. It includes an account of—

1. The Structure, Composition, and Functions of the Tissues of the Body.
2. The Nutrition of the Body, including Circulation, Respiration, Alimentation, Nutrition of the Tissues, Excretion, together with the minute structure of the organs concerned.
3. Animal Heat.
4. Voice and Speech.
5. The minute structure and physiology of the Sense organs, and the special physiology of the Nervous System.
6. Reproduction and Development.

There is a printed Syllabus with short notes of the Lectures.

Text-Books.—Kirkes' Physiology or Foster's Physiology.

Books recommended for consultation.—Landois' and Stirling's "Physiology," Halliburton's "Chemical Physiology."

PRACTICAL PHYSIOLOGY.

This Course is divided into three sections—

1. *Practical Histology*, in which every Student prepares,

examines, and preserves for himself most ot the tissues and organs of the body. Each student is provided with a microscope, and all reagents.

2. *Practical Chemical Physiology*, in which every student performs the qualitative and quantitative analysis of the Urine in its normal and abnormal conditions, with special reference to clinical work, and such practical work at the Chemistry of Proteids and Carbohydrates, Blood, Milk, and Bile as is possible in a class.

The above sections of the class are held both in the Winter and Summer Sessions. In each session the class meets sixty times.

3. *Demonstrations of Physiological Instruments.*—This section of the class is held only in Winter, and is open to all who have attended the other sections of the course.

PHYSIOLOGICAL RESEARCH.

The Physiological Laboratory is open daily for the prosecution of Physiological Research. Application must be made to the Professor.

VII. MATERIA MEDICA AND THERAPEUTICS.

PROFESSOR THOMAS R. FRASER.

Materia Medica comprises the subjects of pharmacognosy, pharmacy, pharmacology, therapeutics, and dietetics ; and the remedial applications of electricity and galvanism, heat and cold, &c. Instruction in Materia Medica is given in (A) a course of 100 Lectures during the Winter Session, and in (B) Practical Classes during the Summer Session, and of equivalent duration during the Winter Session.

A.—LECTURES ON MATERIA MEDICA AND THERAPEUTICS. —This course includes the following among other *Special Topics.*—1. The natural history, pharmacy, physiological action (or pharmacology), therapeutical uses, and modes of administering remedies, ordinarily so called. Such remedies consist of (*a*) mineral substances; (*b*) vegetable substances; (*c*) animal substances. 2. Food and drink, considered generally and in reference to disease. 3. Electricity and galvanism, with a description of the apparatus required for their application in disease. 4. Heat and cold. 5. Climate. In each course of Lectures the subjects included in 1 will be fully discussed, but a selection only will be made from the subjects included in 2, 3, 4, and 5, according to the time that may be left for their consideration.

B.—PRACTICAL CLASSES.—In these classes, *practical* instruction is given in the following subjects embraced in Materia Medica, but which cannot satisfactorily be taught in a course of lectures:—1. Pharmacognosy, or the recognition of drugs by their physical and chemical characters, and the detection of adulterations. 2. Pharmacy, or the processes for obtaining the pharmaceutical preparations of drugs. 3. Dispensing, or the making up of medicines in forms suitable for administration in disease.

It is recommended that the practical class be attended before the course of lectures on Materia Medica and Therapeutics. Practical classes are taught during the Summer Session, when they meet daily at such hours as are found most convenient. A winter class will also be formed in October.

PHARMACOLOGICAL AND PHARMACEUTICAL LABORATORIES.

The above laboratories will be open daily to present and former Students of the class of Materia Medica for Pharmacological and Pharmaceutical Research, under the superintendence of the Professor and his Assistants.

VIII. GENERAL PATHOLOGY, INCLUDING MORBID ANATOMY.

PROFESSOR GREENFIELD.

This Course includes General Pathology, General Pathological Anatomy and Histology, and Systematic Morbid Anatomy.

The subjects are treated mainly in the following order—

1. General Pathology (including General Pathological Anatomy), *i.e.*, the study of the processes of disease, as to their causation, phenomena, physiological and physico-chemical relations and characters. Under this head are considered Degenerative Processes, Inflammation, Repair, Morbid Growths, &c.

2. General Etiology is treated in fuller detail with reference to Parasitic and Infective Diseases, and includes Bacteriology and methods of bacteriological research.

3. Systematic Morbid Anatomy and Histology—a study of the more important diseases of the principal systems and organs of the body, especially in relation to structural and physical alterations.

In illustration of the lectures, in addition to plates, diagrams, &c., there are frequent naked eye and microscopic demonstrations of recent specimens, of preparations from the University Anatomical Museum and from the Professor's private collection —and also demonstrations of apparatus, photographs, sections, &c., by the limelight, and in other ways.

PRACTICAL PATHOLOGY.

Classes for Practical Instruction in MORBID ANATOMY and PATHOLOGICAL HISTOLOGY are conducted in the Pathological Laboratory—microscopes and other necessary apparatus being supplied. The Course consists of—1st. Naked Eye Demonstration; 2d. Histological investigation and preparation of Morbid Structures and Organs; 3rd. Elementary Bacteriology.

For the Winter Course, the class meets five times a week, from the beginning of the Session till the end of January. For the Summer Course, five times a week, from the beginning of May till the end of July.

The Laboratory is also open daily from 10 A.M. till 4 P.M. for Pathological Research, under the direction of the Professor and his Assistants.

IX. PRACTICE OF PHYSIC.

PROFESSOR GRAINGER STEWART.

This Course comprises—

I. An account of the nature, and more particularly of the clinical characteristics, and the treatment of the different types of morbid action.

II. An account of the morbid anatomy, clinical history, causes, diagnosis, prognosis, and treatment of the diseases of the different systems and organs.

It is intended that each course shall be, as far as possible, complete; but that, while the general principles (included in Part I.) shall be fully discussed each session, the diseases of individual systems (included in Part II.,) shall be taken up in different order year by year, and certain systems selected for more minute consideration.

The course is illustrated by specimens from the Anatomical Museum of the University, and from the Professor's private collection, as well as by numerous drawings, diagrams, and charts.

TUTORIAL CLASS.

Practical instruction in connection with the Course is given to the members of the Class by the Assistant.

Text-Books.—Fagge's, Bristowe's, Bartholow's, Roberts, Osler's, or Frederick Taylor's "Practice of Medicine." Students are also advised to consult the Professor's "Introduction to the Study of Nervous Diseases," and Dr Graham Brown's, Drs Gibson and Russell's, or Dr Finlayson's works on Medical Diagnosis.

X. SURGERY.

PROFESSOR CHIENE.

Winter Session.

1. *Lectures*, 2 P.M. This course of lectures is devoted to a systematic consideration of the Principles and Practice of Surgery. It is intended that each course shall embrace, as far as possible, a complete view of the present aspects of the Science and Practice of Surgery.

Written examinations are held at stated periods, and at the end of the Session a practical examination is held on the work of the Tutorial Classes.

2. *Tutorial Instruction*, at hours most convenient for the students, includes—

- (*a.*) *Practical Instruction* in *Bandaging* and the *Treatment* of *Fractures* and *Dislocations* on the living subject. This class is divided into sections for Senior and Junior Students.
- (*b.*) Demonstrations of Surgical Instruments and Appliances.
- (*c.*) Weekly Demonstrations on the Surgery of the Eye and Ear and on Surgical Pathology, illustrated by museum specimens.
- (*d.*) Weekly Revisal of the Lectures, together with Demonstrations of the Preparations in the Surgical Museum illustrative of the Lectures on Surgery.
- (*e.*) Lantern Demonstrations of Surgical Pathology.

Summer Session.

The Summer Session is devoted to a consideration of the Practical Aspects of Surgery. Special attention is given to Surgical Anatomy and Operative Surgery. The class meets daily during the months of April, May, and June. During June the class is divided into sections for practical work. Oral examinations and tutorial instruction in the Treatment of Fractures and Dislocations, and in the uses of surgical instruments, form a special part of the course. Special demonstrations are given on Surgical Pathology.

The Surgical Laboratory is divided into two departments,—1st, Surgical Pathology; 2d, Bacteriology. It is open daily for original work during the Winter and Summer Sessions, under the superintendence of the Professor, assisted by Harold J. Stiles, M.B. Applications to be made to the Professor.

Text-Books—Winter Session.—The Professor's "Lectures on the First Principles of Surgery." Erichsen's "Science and Art of Surgery," 9th edition, by Marcus Beck. *Summer Session.*—The Professor's "Lectures on Surgical Anatomy," and Joseph Bell's Manual of Surgical Operations, 1892: "Operative Surgery."

XI. MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

PROFESSOR SIMPSON.

The Course of Instruction comprises Lectures on—

I. The Anatomy and Physiology of the Female Organs of Reproduction.

II. The Physiology, Pathology, and Therapeutics of Pregnancy.

III. Parturition—Natural (Eutocia), and Morbid (Dystocia).

IV. The Hygiene, Pathology, and Therapeutics of the Puerperal State.

V. The Hygiene, Pathology, and Therapeutics of Infancy and Childhood.

VI. The Special Pathology and Therapeutics of the Female Organs of Reproduction.

One day in each week is devoted to the Gynecological Section of the Course; and the Diseases of Women may be studied clinically in the Royal Infirmary, in the Buchanan Medical Ward, in connection with the class of Clinical Medicine.

Midwifery may be studied clinically in the Royal Maternity, of which the Professor is, *ex officio*, one of the Medical Officers, and where he is in attendance during the first three months of the Winter Session. The Professor makes a special Clinical visit with the Students, who have taken the Maternity Ticket, on Saturdays, at the usual Lecture hour—10 A.M.; and he or one of the Assistant Physicians gives Clinical Instruction on Wednesday afternoons at 4 P.M.

After the Class-roll is made up, Tutorial classes are formed for Practical Instruction in the use of Obstetric and Gynecological Instruments and Appliances.

Medals and Certificates of Merit are awarded for answers at three Written Examinations held during the Session.

Summer Session.

A Course of Instruction in Obstetric and Gynecological Operations, with Demonstrations of the use of Instruments and Appliances, is conducted during the Summer Session at 10 A.M.

On Tuesdays and Fridays the Professor gives Lectures and Demonstrations. On the other days of the week the sections of the class are trained in the investigation and treatment of Female Diseases, and the members of the class have an opportunity of practising operations on lay figures.

Text-Books.—Playfair's, Lusk's, or Parvin's "Midwifery." The Professor's "Contributions to Obstetrics and Gynecology." Hart and Barbour's "Manual of Gynecology."

SCHOLARSHIPS IN MIDWIFERY AND GYNECOLOGY.

The Buchanan Scholarship in Gynecology, and the James Scott Scholarship in Midwifery, are open to members of the class. For conditions, *see* "SCHOLARSHIPS IN MEDICINE."

XII. MEDICAL JURISPRUDENCE.

PROFESSOR SIR DOUGLAS MACLAGAN.

Part I.—Medical Jurisprudence.

MEDICAL EVIDENCE GENERALLY.

1. Documentary.
2. Oral.
3. Experimental—

Examination of the living; identity; Examination of the dead; identity; cause of death; exhumations, autopsies.

MEDICAL EVIDENCE SPECIALLY.

Questions affecting Health or Life.

1. Assaults and Homicide—

Wounds and other external injuries; asphyxia. Starvation. Heat and cold. Poisons.

2. Suicide.
3. Offences against Chastity—

Rape, &c.; concealment of pregnancy; criminal abortion; infanticide.

4. Malpraxis and Neglect of Duty.

Questions affecting Civil Rights or Social States.

Marriage and Divorce. Impotence and sterility. Live birth; Survivorship. Insanity. Feigned diseases.

Part II.—Medical Police. Public Health.

HYGIENE OF INDIVIDUALS.

Man—

Age and development. Sex. Constitution.

External Agencies—

Food and Drink. Air. Clothing. Ablutions. Exercise.

Habits and Modes of Life—

Temperance. Celibacy and Marriage. Professions: learned, mechanical, criminal. Punishments. Prostitution.

Duration and Expectancy of Life—

Life Assurance.

HYGIENE OF COMMUNITIES.

Sanitary Administration.

Climate—

Causing disease; remedying disease.

Towns, Camps, and Private Habitations—

Topographical position; water supply; heating and lighting; ventilation; drainage and sewerage.

Public Buildings—

Schools; churches; hospitals; theatres; prisons.

Cemeteries. Quarantine Establishments. Epidemics; Endemics. Disinfectants.

Text-Books.—Taylor's "Medical Jurisprudence," Guy's "Principles of Forensic Medicine," Parkes' "Practical Hygiene," Wilson's "Handbook of Hygiene," Louis Parkes' "Hygiene," Wynter Blyth's "Manual of Public Health," Whitelegge's "Hygiene and Public Health," Smith's "Laws Concerning Public Health," Vesey Fitzgerald's "Epitome of the Laws affecting Health," Newsholme's "Vital Statistics," Dykes' and Stuart's "Manual of Public Health Acts."

Public Health Laboratory.

The Laboratory comprises three Departments, the Chemical Laboratory, the Bacteriological Laboratory, and a station for making meteorological observations, and the examination of emanations from the soil.

The Laboratories will be open daily during the Winter and Summer Sessions, from 10 to 4, under the superintendence of the Professor and Charles Hunter Stewart, M.B., B.Sc.

The work in these Laboratories will constitute an advanced course of instruction in the Methods of Hygienic investigation, and is intended for those who may desire to prepare themselves for taking the Degrees of Science in Public Health, or for the duties of Medical Officer of Health.

The Fees are £10, 10s. for the Winter, and £6, 6s. for the Summer Session.

XIII. CLINICAL SURGERY.

PROFESSOR ANNANDALE.

The objects of this Course are to teach the symptoms, diagnosis, and treatment of Surgical diseases and injuries as met with in the living body, and to point out modifications and complications which occur in connection with them. With these views patients are brought before the class in the special University Clinical Theatre of the Infirmary, and their conditions are carefully examined and discussed, due regard being taken to avoid anything likely to injure their feelings or in any way aggravate their disease. The history and nature of the case having been studied, the proper treatment is suggested and described, and is then either carried out at once or on the first convenient occasion. In addition to the regular lectures operations are performed in the Clinical Theatre, practical demonstrations are given in the wards of the Infirmary, and upon two days in the week the cases of patients attending the out-patient department are specially considered by the Assistant Surgeon, Dr Thomson, so as to instruct the students in connection with the minor and more common surgical affections. Practical instruction as to the examination of patients, the observation of symptoms, the treatment of surgical emergencies, the use of instruments, the application of dressings, and other surgical details is given by the Clinical Tutor (Dr Logan Turner) attached to the Chair, in small classes, which are free to all Students attending the Course.

Text-Books.—Any of the recent standard works upon Surgery. Students are also advised to study some of the best works (old and new) on the special subjects of Practical Surgery.

XIV. CLINICAL MEDICINE.

PROFESSORS GRAINGER STEWART, FRASER, AND GREENFIELD, WITH PROFESSOR SIMPSON FOR DISEASES OF WOMEN.

The course of Clinical Medicine, consisting of Clinical Lectures and Instruction in the University wards of the Royal Infirmary, is conducted conjointly by the Clinical Professors—all the Professors being on duty during both the Winter and Summer Sessions, the Professor of Midwifery giving lectures and demonstrations on Gynecological Medicine on certain days.

The Course consists of:—1. Practical Instruction on three days a week at the bedside. 2. Critical Expositions and Discussions of cases in the lecture-room on two days a week.

Every facility is afforded to members of the Class to act as Clinical Clerks, and those are preferred who have already had a course of tutorial instruction. At the close of each Summer Session, six gentlemen, who have been members of the Class, are appointed to be Resident Physicians in the Clinical Wards during the following Winter and Summer Sessions.

CLINICAL TUTORIAL CLASS.

Practical instruction in the Methods of Physical Examination is given to the members of the Class by the University Clinical Tutors.

Junior Students are strongly advised to take this course of instruction along with their first course of Clinical Medicine.

LECTURESHIPS.

I. MENTAL DISEASES.

LECTURER—THOMAS S. CLOUSTON, M.D.

This course consists of—

1. Systematic Lectures in the University during the Summer Session on the Classification, Symptoms, Causes, and Treatment of Mental Diseases.

2. Pathological demonstrations, naked eye and microscopic, in the University and at the Royal Asylum, Morningside, of the Morbid Anatomy of Insanity. Students will have an opportunity of original investigation in the Pathological Museum of the Asylum.

3. Clinical instruction at the Royal Asylum, Morningside (West House), in all the forms of Mental Disease. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of managing and dealing with patients labouring under Mental Disease, and they are exercised in the diagnosis of Insanity and the drawing up of certificates; the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to the question of sending the patient to an asylum or not. There is a clinical field of 500 beds, comprising all the wards except those for private patients. This part of the course extends through the Summer and the last month of the Winter Session.

4. Instruction in regard to the medico-legal, hereditary, educational, and social relations of Mental Disease, and on its bearings and significance in ordinary medical practice.

There are Free Clinical Clerkships, tenable for three months, in the Royal Edinburgh Asylum, and in several other Asylums, in connection with the class.

Text-Book.—Dr Clouston's "Clinical Lectures on Mental Diseases."

II. DISEASES OF THE EYE.

LECTURER—D. ARGYLL ROBERTSON, M.D.

The course will consist—

1. Of systematic lectures delivered daily at 9 A.M. for seven weeks during the Summer Session, at which the symptoms, diagnosis, and treatment of the more important diseased conditions of the eye and its appendages will be discussed. The lectures will be illustrated by drawings, diagrams, &c.

2. Of clinical instruction daily at the Ophthalmic wards of the Royal Infirmary, where opportunities will be afforded for practising the use of the ophthalmoscope. Special practical instruction will be given in ophthalmoscopic affections and errors of refraction.

Text-Books.—Swanzy's "Handbook on Diseases of the Eye," Lawson on "Diseases and Injuries of the Eye," or Nettleship on "Diseases of the Eye."

Works of reference.—Berry's "Treatise on Diseases of the Eye." Meyer's "Practical Treatise on Diseases of the Eye," translated by Fergus. Landolt on the "Refraction and Accommodation of the Eye," translated by Culver. Gowers' "Medical Ophthalmoscopy."

III. CLINICAL INSTRUCTION ON DISEASE IN CHILDREN.

LECTURERS—JAMES CARMICHAEL, M.D., JOHN PLAYFAIR, M.D.

Two Courses, each of three months' duration, will be conducted annually, one during the Winter Session, and one during the Summer Session.

The instruction is given in the wards of the Royal Hospital for Sick Children. Special attention is directed to Hygiene, Diagnosis, and Treatment during the period of Infancy.

Works of reference.—Keating's "Cyclopædia of the Diseases of Children," Henoch or Eustace Smith on "Disease in Children."

Text-Book. — Carmichael's "Manual of Disease in Children."

IV. COMPARATIVE EMBRYOLOGY.

LECTURER—MR GEORGE BROOK.

Winter Session.

The Course consists of fifty meetings, which will be devoted in part to Lectures and in part to Practical Work and Demonstrations.

PART 1.—Sketch of the early development of Amphioxus, the Frog, the Chick, and the Rabbit, as a basis for Embryological Enquiry.

PART 2.—Vertebrate Organogeny;—including an outline of the development of the fœtal appendages of Birds, Reptiles, and Mammals; the epidermis and its derivatives; the nervous system and sense organs; the skeletal, vascular, muscular, and urogenital systems; the alimentary canal and its appendages.

The Laboratory work will include a practical study of the development of the Chick, and instruction in the modern methods of research.

RESEARCH WORK.

The Laboratory is open daily in the Summer as well as in the Winter Session for the prosecution of Embryological Research.

Regulations for Graduation in Medicine and Surgery.

A.—APPLICABLE TO ALL WHO COMMENCE THEIR MEDICAL STUDIES AFTER 1ST OCTOBER 1892.

For those who commenced Medical Studies before 1*st October* 1892, *see Regulations B, page* 426.

ORDINANCE No. 16. EDINBURGH, No. 1.—REGULATIONS FOR DEGREES IN MEDICINE.

APPROVED BY HER MAJESTY IN COUNCIL ON 8TH AUGUST 1892.

At Edinburgh, the third day of February eighteen hundred and ninety-two years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-section (5), to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto, and in particular the course of study and manner of teaching, the length of the academical session or sessions, the manner of examination, the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration, the granting of degrees, and the institution of new degrees; the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations; and by the said section 14, 'sub-section (16), to repeal or modify any Ordinance made under the provisions of the Universities (Scotland) Act, 1858:—

Therefore the Commissioners under the first mentioned Act statute and ordain with regard to the University of Edinburgh as follows:—

I. Four Degrees in Medicine and Surgery shall be conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The Degree of Bachelor of Surgery shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine, and the Degree of Bachelor of Medicine shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Surgery.

II. Subject to Regulations to be made from time to time by the University Court, the University may also confer Diplomas in Special Branches of Medical and Surgical Practice on Graduates of the University in Medicine and Surgery.

PRELIMINARY EXAMINATION.[1]

III. Before commencing his medical studies, each student must pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate may be substituted for one in either French or German, and an examination in any other classical language for one in Latin or Greek.

IV. The extent and standard of the Preliminary Examination shall be determined by the Joint Board of Examiners constituted under Ordinance, General, No. 8 [Regulations as to Examinations], in accordance with the terms of that Ordinance.

V. The Preliminary Examination shall be conducted in accordance with the provisions of Ordinance, General, No. 8 [Regulations as to Examinations];—and, subject to the provisions of the immediately succeeding section hereof, the entire examination shall be passed at one and the same time, except in the case of students who, prior to the date at which this Ordinance shall come into operation, have passed a portion of the Preliminary Examination of the University, or of a Preliminary Examination recognised by the University.

VI. A Degree in Arts, or in Science (not being a Degree *honoris causa tantum*), in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court, shall exempt from the Preliminary Examination; and the Joint Board of Examiners appointed under the provisions of Ordinance, General, No. 8 [Regulations as to Examinations], shall have power to determine what examinations, other than those for the degrees hereinbefore mentioned, shall be accepted either in whole or in part in place of the Preliminary Examination.

PROFESSIONAL EDUCATION.[2]

VII. Candidates shall be admitted to the Degree of Bachelor of Medicine and Bachelor of Surgery only after they have fulfilled the following conditions:—

1. The candidate must have been engaged in Medical study for at least five years.
2. In each of the first four years the candidate must have attended at least two courses of instruction, in one or more of the subjects of

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[1] See also pages 119 to 123 inclusively.

[2] No Course of Lectures will be allowed to qualify unless the Lecturer certifies that it has embraced at least 100 Lectures or 50 Lectures, in conformity with the requirements of this section. Three Months Courses on Materia Medica, Pathology, and Midwifery do not qualify.

study specified in sub-section 4 hereof—each Course extending over a session of not less than five months, either continuous or divided into two terms ; or, alternatively, one such Course, along with two Courses, each extending over a session of not less than two and a half months.

3. During the fifth or final year the candidate shall be engaged in Clinical study for at least nine months at the Royal Infirmary, Edinburgh, or at one or more of such Public Hospitals or Dispensaries, British or Foreign, as may be recognised for the purpose by the University Court.

4. The Candidate must, during his Curriculum, have attended a Course or Courses of instruction in each of the following subjects of study, including such Examinations as may be prescribed in the various Classes, viz. :—

1. ANATOMY,	During a Course of not less than Five Months.
2. PRACTICAL ANATOMY,	During two Courses of not less than Five Months each.[1]
3. CHEMISTRY,	During Courses of not less than Five Months.
4. MATERIA MEDICA and THERAPEUTICS,	
5. PHYSIOLOGY or INSTITUTES OF MEDICINE,	
6. PRACTICE OF MEDICINE,	
7. SURGERY,	
8. MIDWIFERY, and the DISEASES peculiar to WOMEN and INFANTS. Two Courses of Midwifery, of Three Months each, provided different departments of Obstetric Medicine be taught in each of the Courses, shall be reckoned equivalent to a Course of not less than Five Months,	
9. PATHOLOGY,	
10. PRACTICAL CHEMISTRY,	During Courses of not less than Two and a half Months.
11. PHYSICS (including the DYNAMICS OF SOLIDS, LIQUIDS, and GASES, and the RUDIMENTS OF SOUND, HEAT, LIGHT, and ELECTRICITY),	
12. ELEMENTARY BOTANY,	
13. ELEMENTARY ZOOLOGY,	
14. PRACTICAL PHYSIOLOGY,	
15. PRACTICAL PATHOLOGY,	
16. MEDICAL JURISPRUDENCE and PUBLIC HEALTH,	

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[1] Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for Examination in Anatomy, with a view to a Degree, until they have dissected the human body at least once.

Provided always in so far as regards the University of Edinburgh that—

(*a*) It shall be the duty of the Senatus to determine from time to time the number of meetings of which such Courses shall consist, and in what cases two half Courses shall be deemed equivalent to a full Course ; and to report the determination to the University Court for its approval.

(*b*) It shall be the duty of the Professors and Lecturers to submit to the Senatus annually at the end of the Winter Session a scheme specifying what proportion of the Courses shall be devoted to Lectures, Practical Demonstrations, Examinations, and Tutorial Work respectively. The Senatus shall trasmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(*c*) The University Court shall not grant or continue recognition to any institutions or teachers unless it shall be satisfied that their Courses of Instruction are equivalent to the Courses sanctioned in the Universities of Scotland.

5. The Candidate must have attended for at least three years the Medical and Surgical Practice either of the Royal Infirmary, Edinburgh, or of a General Hospital elsewhere, which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons, and is recognised for the purpose by the University Court.
6. The Candidate must have attended Clinical Surgery during a Course or Courses extending over not less than nine months. These Courses may be conducted by the Professor of Clinical Surgery, or by Professors or Lecturers appointed for the purpose by the University Court, or by the Ordinary Surgeons of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
7. The Candidate must have attended Clinical Medicine during a Course or Courses extending over not less than nine months. These Courses may be conducted by Professors of the University, or by Lecturers appointed for the purpose by the University Court, or by the Ordinary Physicians of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
8. The Candidate must have attended a course of instruction in Mental Diseases of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to time determine.
9. The Candidate must have attended a Course of twenty-five meetings on Practical Pharmacy in a University or recognised School

of Medicine, or have dispensed drugs for a period of three months in an Hospital or Dispensary, or in an establishment recognised by the Pharmaceutical Society.

10. The Candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, or of a Physician or Surgeon, or of a Member of the London or Dublin Society of Apothecaries. He must have acted as Clerk in the Medical and Dresser in the Surgical Wards of a Public Hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying, at an Hospital or Dispensary, *post-mortem* Examinations, Fevers, Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined.
11. The Candidate must have attended, under the superintendence of a registered Medical Practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended for three months the practice of a Lying-in Hospital, or of the Maternity Department of a General Hospital or other Public Charitable Institution, and have conducted personally six, or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine.
12. The candidate must have been properly instructed in Vaccination at a Public Vaccination Station, by a Public Vaccinator, authorised by the proper Government Authority to grant Certificates of Proficiency in Vaccination.[1]
13. No candidate for a degree shall be deemed to have attended a class as part of the Curriculum necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

VIII. With respect to the Places and Institutions at which the studies of the candidate may be prosecuted, the following Regulations shall have effect:—

1. Two of the five years of medical study must be spent in the University of Edinburgh, each year of study including always the attendances specified in section VII., sub-section 2.
2. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court, each year of study

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[1] Recognised Vaccine Departments in Edinburgh are—in the Royal Public Dispensary, 21 West Richmond Street—*Vaccinator*, Dr Husband; in the Western Dispensary, 90 Fountainbridge—*Vaccinator*, Dr J. B. Buist.

during the first four years including always the attendances specified in section VII., sub-section 2.

3. Of the subjects of study specified in section VII., sub-section 4, not less than eight must be taken in the University of Edinburgh, or (subject always to the provisions as to attendance contained in the immediately preceding sub-sections) in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a College incorporated with, or affiliated to a University, entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court: Provided always that where in any of said subjects of study two or more Courses are required, the taking of one of those Courses shall constitute a taking of the subject for the purpose of this sub-section.
4. The remainder of such subjects of study may (subject always as aforesaid) be taken in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court.
5. All Candidates, not Matriculated Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.
6. The Fee for attendance, for purposes of graduation, on the Courses of instruction of recognised Extra-Academical Teachers in Edinburgh, shall be not less than the amount exigible for the corresponding Courses in the University.

   [*The fee must be paid at the commencement of the Course.*]
7. The University Court shall not recognise as qualifying for examination in any of the subjects specified in section VII., sub-section 4, the class of any teacher who is at the time a teacher of more than one of the said subjects, except in those cases where Professors in the University are at liberty to teach the two subjects: Provided always that a Professor or other Teacher in any endowed public College or Institution, who, by the terms of his appointment, is required to teach more than one subject of Medical Study therein, may be recognised under sub-section 2 of this section as a Teacher of any one of the subjects which he teaches.
8. A Teacher, attendance on whose course of instruction shall, before the date of the approval of this Ordinance by Her Majesty in Council, have been recognised for the purposes of graduation in the University, shall not require to obtain a new recognition from the University Court; and attendance on the course of

instruction of every such Teacher may continue to be recognised as heretofore.

9. It shall be in the power of the University Court, if it shall see cause, at any time to withdraw or suspend any recognition which it may have granted.

IX. In the University of Edinburgh it shall be the duty of the Professors of the subjects specified in section VII., sub-section 4 hereof (except Practical Anatomy and such other subjects as the Senatus, with the approval of the University Court, may from time to time determine), so to conduct the Courses that Students may receive instruction sufficient for graduation in any one of the said subjects by attendance on one Course of five or six months, or of two and a half or three months as the case may be.

X. If any Candidate shall, before presenting himself for his Preliminary Examination, have attended in any University of the United Kingdom, or in any University or Institution specially approved, or under any Teacher specially recognised for the purpose by the University Court, a Course or Courses of instruction in Physics, Chemistry, Botany, or Zoology, equivalent in the judgment of the Senatus to the qualifying Course in the same subject in the University of Edinburgh, such attendance shall (notwithstanding anything hereinbefore ordained) be held as entitling him to be examined in these subjects; and if the Candidate shall have attended such Course or Courses in each of the said subjects, he shall be held to have completed his first year of Medical Study: Provided always that the evidence of such attendance at such equivalent Course or Courses shall be presented to the Senatus at the time when the Candidate presents himself for his Preliminary Examination; and the Senatus shall, if satisfied, grant a certificate to that effect.

PROFESSIONAL EXAMINATION FOR THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.

XI. Each candidate shall be examined, both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions, viz.:—*First*, in Botany, Zoology, Physics, and Chemistry; *Second*, in Anatomy, Physiology, and Materia Medica and Therapeutics; *Third*, in Pathology, and Medical Jurisprudence and Public Health; *Fourth*, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, and Midwifery.

In subjects which admit of practical instruction, the examination shall be such as to test the practical acquirements of the candidate.

Provided always that if a candidate have obtained in a University of the United Kingdom, or other University specially recognised for the purpose by the University Court, a Degree in Science or in Arts, granted in either case after a course of study and an examination in Botany, Zoology, Physics, and Chemistry, he shall be held to have passed his examinations in the said subjects.

XII. Candidates who profess themselves ready to submit to an examination in the subjects comprised in the first division, viz., Botany, Zoology, Physics, and Chemistry, may be admitted to examination in all or any two of these subjects at any examination held after they have attended a full Course in each of the subjects professed.

XIII. Candidates who have passed their examinations in the subjects comprised in the first division may be admitted to examination in the second division at the end of the third winter session.

Provided that candidates who so desire may postpone their examination in Materia Medica and Therapeutics until the close of the summer session following.

XIV. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session.

Provided that candidates who so desire may postpone their examination in Medical Jurisprudence and Public Health until the close of the summer session following.

XV. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division, when they have completed the fifth year of study.

XVI. If any candidate at these examinations be found unqualified in one or more subjects, he shall not again be admitted to examination unless he has pursued his medical studies for such time, and subject to such conditions, as the Faculty of Medicine may prescribe.

XVII. If any candidate at these examinations be found to have passed in one or more subjects with sufficient merit, he shall not be liable to re-examination in such subject or subjects, although he may have been found unqualified in a subject or subjects comprised in the same division as hereinbefore specified.

XVIII. Every candidate must deliver, on or before such day as the Senatus may from time to time determine, to the Dean of the Faculty of Medicine, a declaration, in his own handwriting, that he has completed his twenty-first year, or that he will have completed it on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

XIX. After the candidate has satisfied the Examiners, the Dean of the Faculty of Medicine shall lay the proceedings before the Senatus, by whose authority the candidate shall be admitted, on such day as the Senatus may from time to time appoint, to the Degrees of Bachelor of Medicine and Bachelor of Surgery, on payment of the required fees.

XX. Candidates for graduation shall produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies, except in so far as is provided in section XXV. hereof.

PROFESSIONAL EXAMINATION FOR THE DEGREE OF DOCTOR OF MEDICINE.

XXI. 1. Subject to the conditions hereinafter specified, the Degree of Doctor of Medicine shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Edinburgh, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in Practice other than Practice restricted to Surgery.

2. Each candidate for the Degree of Doctor of Medicine shall be required to pass an examination in Clinical Medicine and in such of its special departments as the Senatus, with the approval of the University Court, by Regulations framed from time to time, shall determine; and he may present himself for examination in Clinical Medicine at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

3. Each candidate for the Degree of Doctor of Medicine shall submit for the approval of the Faculty of Medicine a Thesis, on any branch of knowledge comprised in the second, third, or fourth examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects which are exclusively Surgical; and the Thesis, accompanied by a declaration signed by the candidate, that the work has been done and the Thesis composed by himself, shall be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.[1]

4. A Bachelor of Medicine and Bachelor of Surgery, who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to the examination in Clinical Medicine at any period of examination after he has received such Degrees; but the Degree of Doctor of Medicine shall not be conferred on him unless he shall produce a certificate that, subsequently to

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[1] Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only.

having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively surgical, and unless his Thesis, in the judgment of the Faculty of Medicine, is of exceptional merit.

PROFESSIONAL EXAMINATION FOR DEGREE OF MASTER OF SURGERY.

XXII. 1. Subject to the conditions hereinafter specified the Degree of Master of Surgery shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Edinburgh, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to his having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in practice other than practice restricted to Medicine.

2. Each candidate for the Degree of Master of Surgery shall be required to pass an examination in the following subjects:—Surgical Anatomy, Operations upon the dead body, and Clinical Surgery, and in such of the special departments of Clinical Surgery as the Senatus, with the approval of the University Court, by Regulations framed from time to time, may determine; and he may present himself for examination in these subjects at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

3. Each candidate for the Degree of Master of Surgery shall submit, for the approval of the Faculty of Medicine, a Thesis on any branch of knowledge comprised in the second, third, or fourth Examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects that are exclusively medical; and the Thesis, accompanied by a declaration signed by the candidate that the work has been done and the Thesis composed by himself, shall be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.[1]

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[1] See footnote, page 411.

4. A Bachelor of Medicine and Bachelor of Surgery who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such Degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to examination in the subjects specified in sub-section 2 of this section at any period of examination after he has received such Degrees ; but the Degree of Master of Surgery shall not be conferred on him unless he shall produce a certificate that, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively medical, and unless his Thesis in the judgment of the Faculty of Medicine is of exceptional merit.

FEES.

XXIII. The fee to be paid for the Degrees of Bachelor of Medicine and Bachelor of Surgery shall be twenty-two guineas, and the proportion of this sum to be paid by a candidate at each division of the examination shall be regulated from time to time by the University Court. The fee to be paid for the Degree of Doctor of Medicine shall be ten guineas, exclusive of any stamp duty which for the time may be exigible. The fee to be paid for the Degree of Master of Surgery shall be ten guineas.

EXAMINERS.

XXIV. The Examiners for graduation in Medicine in the University of Edinburgh shall be the Professors in that University, together with such Lecturers in the University and such additional Examiners, to be appointed by the University Court, as the University Court shall deem necessary. Provided that the Court shall make such provisions as will ensure that every Candidate shall be examined in each subject by at least two Examiners, of whom one shall not be a Professor or Lecturer in the University. The examinations shall be conducted under regulations framed by the Senatus, subject to the approval of the University Court.

DATE OF COMING INTO EFFECT.

XXV. Every student who began his Medical Studies before the date (1st October 1892) when this Ordinance shall come into operation shall be entitled to graduate under the system in force before or after that date, according as he shall comply with the Regulations in force in the University before or after that date.

DATES OF ENTERING FOR PRELIMINARY EXAMINATION AND OF PAYMENT OF FEES.[1]

(*For Time-Table of Examinations, see pages* 122 *and* 123.)

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates who intend to present themselves for Examination may obtain Schedules at the Office of the Faculty of Medicine, University (New) Buildings. The Schedules must be completed and lodged and the fees paid at the Matriculation Office, University (Old) Buildings, not later than 22nd September 1893 and 21st March 1894 for the autumn and spring Examinations respectively.

Candidates who cannot attend personally to pay the fees should transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, and not by cheques on private accounts. When names are not entered nor Fees paid on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. A Candidate is not held to have entered for the Examination until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

MATRICULATION, &c., OF STUDENTS.

All Students are required to take their tickets for each course of Lectures, which they propose to attend, not later than fifteen days after the commencement of the course, and they must matriculate before they can be enrolled in any of the Classes in the University. Matriculation consists in paying during each year of study an entrance fee of £1 to the University, and in inscribing the name in the Students' Album. The matriculation fee for a Summer Session is 10s.

All Candidates for Degrees, not Students of the University, availing themselves of the permission to attend the Classes of Extra-Academical Teachers in Edinburgh, must conform to the Ordinance Section VIII., 5, 6.

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[1] A Local Centre has been established at the University College of North Wales, Bangor, where examinations in the Preliminary Subjects will be held on the same days and hours as in Edinburgh. An additional fee of 5s. is payable by each Student undergoing examination at Bangor. This fee admits to examination in April and October in any one year, and is payable to the Registrar at Bangor on or before 22nd September 1893 and 24th March 1894 for the examinations in April and October respectively.

Every Candidate for Degrees in Medicine and Surgery must matriculate at the University for the year in which he appears for Professional Examination or for Graduation. He should intimate his intention to graduate, and pay the Fee of £1 for Registration as a member of the University General Council (if not already a member) at least ten days before the date of Graduation.

GENERAL MEDICAL COUNCIL REGISTRATION OF STUDENTS OF MEDICINE.

According to the Regulations of the General Medical Council of the United Kingdom, all Medical Students must register in the Medical Students' Register of the General Medical Council within fifteen days after the commencement of Medical Study, and should not neglect this requirement. Forms of application and full information regarding Registration may be obtained from James Robertson, Registrar of the Branch Council for Scotland, 1 George Square, Edinburgh, or at the Office of the Faculty of Medicine.

REGULATIONS AS TO CLASS EXAMINATIONS.

With a view to promote the Educational interests of the students during the time they are occupied with the respective subjects in the Classes, the Senatus recommend :—

1. That there should be at least two Special Class-Examinations in the Classes in the Faculty of Medicine during each Session, conducted by means of questions and written answers, without aid from books or notes.

2. That in the event of a student gaining 75 per cent. or more of the available marks in any department, he shall obtain a Certificate in the First Class of Honours.

3. That in the event of a student gaining 50 per cent. or more, but less than 75 per cent., of the available marks in any department, he shall receive a Certificate in the Second Class of Honours.

University Bronze Medals are also given for Competitive Class Examinations.

CERTIFICATES OF ATTENDANCE ON CLASSES IN THE FACULTY OF MEDICINE.

The Senatus Academicus have resolved that the Certificates of Attendance to be granted to students in the Faculty of Medicine shall be regulated in the following manner :—

Each Professor shall ascertain the presence of his pupils at least twenty-six times in a Course of six months' duration, and thirteen times in a Course of three months' duration.

Those who have been absent twelve or more times in a six months' Course, or six or more times in a three months' Course, or have not duly performed the work of the Class, including any Examinations that may be held, shall not be entitled to any Certificate.

The following is the form of Certificate which must be adopted in all cases :—

"I certify that Mr attended my Course of Instruction on during the Session ; that he was present on of the occasions on which attendance was ascertained ; and that he duly performed the work of the class."

Exceptions will be admitted in the case of those who may be absent from sickness or other unavoidable causes, the particulars of which must be stated to the Professor in writing, accompanied with certificates. All excuses for non-attendance must be given in immediately upon the student returning to his class. But if any student shall have been absent for six weeks or upwards, in a Course of six months, or for three weeks in a Course of three months (whatever the cause of absence may be), his case must be transmitted to the Dean of the Faculty for the decision of the Faculty.

Whenever the student's cause for absence shall be admitted by the Professor or by the Faculty, the Certificate shall bear that he "attended," and shall state the amount of the irregularity and the nature of the excuse.

FIRST PROFESSIONAL EXAMINATION.

The Faculty of Medicine have resolved that the written and oral examinations on Chemistry, Elementary Botany, Elementary Zoology, and Physics shall be restricted in the following manner :—

1. *Chemistry.* — Classification of Elements. General Laws of Chemical Combination and Action, as illustrated in the simpler compounds of the more commonly occurring elements.

Symbolic Notation.

Preparation and Properties of the Non-Metallic Elements and their chief Compounds. Atomic Theory. Combining Volumes of Gases. Relation of Volume of Gas to Temperature and Pressure.

General Properties of Acids, Bases, and Salts—Electrolysis of Salts.

Oxygen, Ozone, Oxidation, and Reduction.

Hydrogen, Water, Peroxide of Hydrogen, Chlorine, Hydrochloric Acid, Hypochlorites, Chlorates, Bromine, Hydrobromic Acid, Iodine, Hydriodic Acid, Iodates, Fluorine, Hydrofluoric Acid. Sulphur, Sulphuretted Hydrogen, Oxides of Sulphur, Sulphites, Sulphates, Thiosulphates, Nitrogen, The Atmosphere, Oxides of Nitrogen, Nitrates, Nitrites, Ammonia, Ammonium Salts, Phosphorus, Oxides of Phosphorus, Chlorides and Oxychloride of Phosphorus, Phosphates, Phosphites, Hypophosphites, Boron, Boracic Acid, Borates, Silicon, Silica, Silicates, Chloride of Silicon, Fluoride of Silicon, Hydrofluosilicic Acid.

Carbon, Oxides of Carbon, Carbonates, Phosgene. Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methylic and Ethylic Alcohols and Ethers. Methylamine, Dimethylamine, Trimethylamine, Tetramethylammonium. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Oxalic Acid, Lactic Acids. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Products of Distillation of Wood and of Coal. Benzene, Benzoic Acid, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea.

The following metals, their Oxides, Sulphides, and more important Salts. Potassium, Sodium, Magnesium, Calcium, Strontium, Barium, Aluminium, Zinc, Manganese, Chromium, Iron, Bismuth, Lead, Copper, Mercury, Silver, Tin, Gold, Platinum, Antimony, Arsenic.

Simple Qualitative Analysis. [*The Examination in Analysis is conducted practically.*]

2. *Elementary Botany.*—The characteristic features of the following groups and classes of the vegetable kingdom :—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts of Morphology (including Anatomy, Histology, and Development) and Physiology. The life-history of the following plants :—Bacterium, Saccharomyces, Mucor, Vaucheria, Eurotium, Funaria, Aspidium, Pinus, Scilla, Helianthus, Ulmus; and the characters of plants belonging to the following natural orders of Phanerogamæ :—Coniferæ, Gramineæ, Orchideæ, Liliaceæ, Urticaceæ, Labiatæ, Compositæ, Umbelliferæ, Rosaceæ, Leguminosæ, Cruciferæ, Ranunculaceæ.

3. *Elementary Zoology.*—(*a*) The General Principles of Biology.

(*b*) The distinctive characters of the Invertebrate groups and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c*) The distinctive characters of the Chordata groups, and the structure, habits, &c., of Myxine, Raia, Clupea, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d*) The skeletons of Crocodilus, Equus, Felis catus, Balæna, Vespertilio, and Simia (Orang).

(*e*) A general knowledge of the orders of Sauropsida and Mammalia.

(*f*) The structure and life-history of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g*) The more important facts of the development of Scyllium, Gallus, and Lepus.

(*h*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

4. *Physics.*—(*a*) Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

(*b*) Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of Time.

(*c*) Sound and Wave-propagation in general, Intensity, Pitch and Quality of Musical Sounds, Harmonics, Concords, &c.

(*d*) Heat, its Nature, Effects, Measurement, Transference and Transformations—Measurement of Temperature and of absolute Temperature, Thermodynamics.

(*e*) Light (1), Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision. (2) Physical Optics—Interference, Dispersion, Diffraction, Double Refraction, Polarisation, Spectrum Analysis.

(*f*) Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

HONOURS AT PROFESSIONAL EXAMINATIONS.

Candidates who have displayed special merit at any of the Professional Examinations will be announced as having passed that Examination "with distinction."

Candidates who have displayed special merit at each of the Professional Examinations will be announced, at the time of the Graduation, as having obtained First or Second Class Honours, according to the merit that has been displayed.

SPONSIO ACADEMICA TO BE SIGNED BY GRADUATES IN MEDICINE.

Ego Doctoratus in Arte Medica titulo jam donandus, sancte coram Deo cordium scrutatore, spondeo, me in omni grati animi officio erga Universitatem Academicam Edinburgensem ad extremum vitæ halitum perseveraturum.

Tum porro Artem Medicam caute, caste, probeque exercitaturum, et quoad potero, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum. Quæ, denique, inter medendum visa vel audita sileri conveniat, non sine gravi causa vulgaturum.

Ita præsens spondenti adsit Numen.

FEES FOR DEGREES IN MEDICINE AND SURGERY.

FEES FOR M.B. AND CH.B.

Fee for the First Division of the Examination, viz., Botany, Zoology, Physics, and Chemistry . .		£6 6 0
or		
For any two of the subjects . .	£3 3 0	
For the other two subjects . .	3 3 0	
For the Second Division, viz., Anatomy, Physiology, and Materia Medica and Therapeutics . . .		6 6 0
or		
For Anatomy and Physiology . .	£4 4 0	
For Materia Medica and Therapeutics	2 2 0	
For the Third Division, viz., Pathology, and Medical Jurisprudence and Public Health		4 4 0
For the Final Division, viz., Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery		6 6 0
		£23 2 0

Candidates who fail to pass either in the whole or in one or more of the subjects in any of the divisions of the Examination, pay £1, 1s. for each subject in which they have failed before they can be re-admitted to Examination in that subject.

Candidates who, under the proviso in Section XI. of the Regulations, are exempted from the first division of the Examination, are required, after passing the final division of the Examination, to pay a fee of £6s, 6s. before they can be admitted to the Degrees of Bachelor of Medicine and Bachelor of Surgery.

Fee for M.D.	£10 10 0
Government Stamp-Duty (for M.D. only), . .	10 0 0
Total for M.D.	£20 10 0
Fee for Ch.M.	£10 10 0

Every Candidate for Examination or for Graduation is required to be a Matriculated Student of the year in which he appears for Examination or Graduation.

Every Candidate for Graduation is also required to pay the fee of £1 for Registration as a Member of the General Council, if not already a Member.

N.B.—The above Fees include all charges for the Diplomas, and Graduates are requested to apply personally for their Diplomas at the Matriculation Office between 12 and 4 on the day of graduation. Any Graduate who cannot appear personally is required to give written authority to some person to receive and give a receipt for his Diploma.

TIME - TABLE OF EXAMINATIONS, AND DATES FOR PRESENTING CERTIFICATES, AND PAYING FEES FOR DEGREES,[1] &c.

The dates of the Examinations for 1893-94 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

Preliminary Examination.[1]

See Time-Table of Examinations, Dates of Entering, and Payment of Fees, pages 122 and 123.

PROFESSIONAL EXAMINATIONS.

Candidates are required to present their Certificates for Examinations at the Office of the Faculty of Medicine, University (New Buildings), and to pay the fees at the Matriculation Office. No fees will be received until the Candidates have shown all the Certificates required to be produced for the Examinations for which they propose to appear.

Candidates, in lodging statements of their Courses of Study with the Dean of the Faculty, will observe that for all Courses and Subjects of Study the Faculty will receive Certificates only as evidence of attendance.

First Professional Examination.[1]

Practical Chemistry—15th July 1893, and following days; and 24th March 1894, and following days, at hours to be announced.

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[1] When names are not entered nor fees paid on or before the stated dates, a late entry fee of ten shillings must be paid before the Candidate can be admitted to Examination. A Candidate is not held to have entered for the Examination until his Name is entered, all the necessary Certificates, &c., lodged, and the Fee paid.

Written Examinations—17th July 1893 and 26th March 1894—Chemistry at 10 o'clock; Botany at 1 o'clock. 18th July 1893 and 27th March 1894—Zoology at 10 o'clock; Physics at 1 o'clock.

Oral Examinations begin 18th July and 27th March 1894.

Names to be given in, Certificates shown, and Fees paid on or before 8th July 1893, and on or before 19th March 1894.[1]

SECOND PROFESSIONAL EXAMINATION.[1]

Written Examinations—19th July 1893 and 30th March 1894—Anatomy at 10 o'clock; Physiology at 1 o'clock, each day. 20th July 1893 and 31st March 1894—Materia Medica and Therapeutics at 10 o'clock, each day.

Oral Examinations begin on 20th July and 31st March.

Names to be given in, Certificates shown, and Fees paid on or before 10th July 1893 and 24th March 1894.

THIRD PROFESSIONAL EXAMINATION.[1]

Written Examinations—12th June 1893—Medical Jurisprudence and Public Health at 1 o'clock. 20th July 1893 and 31st March 1894—Pathology at 1 o'clock, each day.

Oral Examinations begin 14th June, 20th July, and 31st March.

Names to be given in, Certificates shown, and Fees paid on or before 10th July 1893, and on or before 24th March 1894.

FOURTH PROFESSIONAL EXAMINATION.[1]

Written Examinations—1st May 1893—Clinical Surgery Examinations begin: 2nd May 1893—Clinical Medicine Examinations begin. 12th June 1893—Practice of Medicine at 10 o'clock. 13th June 1893—Surgery at 10 o'clock; Midwifery at 1 o'clock.

Oral Examinations begin 14th June.

Names to be given in, Certificates shown, and Fees paid on or before 18th April 1893, and on or before 17th April 1894 for the Examinations in 1893 and 1894 respectively.

Theses for M.D. to be given in, Certificates shown, and Fees paid on or before 30th April 1894, and Stamp Duty to be paid on or before 15th July.[1]

GRADUATION.

Tuesday, 1st August 1893, at 10 A.M. Candidates to assemble at 9 A.M.

Information relative to Matriculation and the Curriculum of Study, and the Subjects of Examinations for Degrees in Medicine and Surgery, and for Fellowships, Scholarships, Bursaries, Prizes, &c., &c., may be obtained on application to the Dean of the Faculty of Medicine, University (New) Buildings.

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[1] See footnote, page 420.

The fees for Matriculation, for Examinations for Degrees, and for Registration as Member of the General Council of the University, are payable at the *Matriculation Office*, *University* (*Old*) *Buildings*. When Candidates cannot attend personally to pay the fees, they should transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed "*Union Bank of Scotland* (*Hunter Square Branch*), *Edinburgh*," and not by cheques on private accounts. When a fee is paid by a cheque on a Bank, an additional sixpence is required to be added to meet Bank exchange, unless the cheque be payable in Edinburgh or London.

EXTRA-ACADEMICAL TEACHERS.

REGULATIONS OF THE UNIVERSITY COURT RELATIVE TO CERTIFICATES OF ATTENDANCE GRANTED BY EXTRA-ACADEMICAL TEACHERS.

The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the number of those occasions on which the Student was present, and in what further respects he duly performed the work of the class. The Certificate should also state the general scope of the Course; and, in particular, in the case of *Chemistry*, that the Course included Organic as well as Inorganic Chemistry; in the case of *Midwifery*, that it included the diseases of Women and Children; and, in the case of *Practical Materia Medica*, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

LIST OF EXTRA-ACADEMICAL TEACHERS, WHOSE LECTURES QUALIFY FOR GRADUATION IN THIS UNIVERSITY.

ABERYSTWYTH.

		Date of Recognition.
J. Ainsworth Davis, M.A.	Natural History,	28 July 1886.
H. Lloyd Snape, D.Sc.	Chemistry & Practical Chemistry,	19 March 1888.

BANGOR.

James J. Dobbie, D.Sc.,	Chemistry & Practical Chemistry,	30 May 1885.
Andrew Gray,	Physics,	26 Oct. 1892.
Reginald W. Phillips, M.A.,	Botany,	30 May 1885.
Philip J. White, M.B.,	Natural History,	9 Dec. 1889.

BIRMINGHAM.

		Date of Recognition.
F. J. Allen, M.A.,	Physiology & Practical Physiology,	12 Dec. 1887.
T. W. Bridge, M.A.,	Zoology,	9 July 1883.
W. Hillhouse, M.A.,	Botany,	26 Nov. 1883.
Dr John Lindsay Steven,	Pathology & Practical Pathology,	10 Apr. 1893.
Wm. A. Tilden, D.Sc.,	Chemistry & Practical Chemistry,	9 July 1883.
Bertram C. A. Windle, M.D.,	Anatomy,	17 Nov. 1884. 29 Oct. 1888.

BRISTOL.

G. Munro Smith, L.R.C.P., M.R.C.S.	Physiology & Practical Physiology,	29 Oct. 1888.

(*Certificates for two consecutive Lecture Courses required.*)

CARDIFF.

W. N. Parker, Ph.D.,	Natural History,	28 July 1886.
Claud M. Thompson, M.A., D.Sc.,	Chemistry & Practical Chemistry,	28 July 1886.

(*Lecture Course may be divided between two consecutive Sessions.*)

DUBLIN.

A. C. Haddon, M.A.,	Natural History,	23 Jan. 1888.
Chs. R. C. Tichborne, Ph.D.,	Practical Chemistry,	28 Feb. 1881.

EDINBURGH.

A. P. Aitken, D.Sc.,	Chemistry & Practical Chemistry,	29 Oct. 1888.
J. O. Affleck, M.D.,	Practice of Physic,	8 Dec. 1879.
Byrom Bramwell, M.D.,	Practice of Physic,	18 Oct. 1880.
J. Macdonald Brown, M.B.,	Anatomy & Practical Anatomy,	18 July 1884.
Alexander Bruce, M.D.,	Pathology & Practical Pathology,	24 January 1887.
Francis M. Caird, M.B., C.M.,	Surgery,	13 August 1886.
Chas. W. Cathcart, M.B., C.M.,	Surgery,	17 Nov. 1884.
Wm. Craig, M.D.,	Materia Medica & Prac. Materia Med.	14 July 1879.
T. W. Drinkwater, Ph.D.	Chemistry, and Practical Chemistry,	8 March 1880. 14 July 1879.
John Duncan, M.D.,	Clinical Surgery,	28 July 1886.
William Duncan,	Prac. Materia Med.,	12 April 1886.
George A. Gibson, M.D.,	Practice of Physic,	9 Dec. 1889.

EDINBURGH—*continued.*

		Date of Recognition.
F. W. N. Haultain, M.D., F.R.C.P.E.,	Midwifery,	15 June 1891.
Claude F. Henry,	Pract. Materia Med.,	26 Oct. 1892.
J. W. B. Hodsdon, M.D.,	Surgery,	3 August 1888.
Alex. James, M.D.,	Pract. of Physic,	3 August 1888.
Alexander Johnstone,	Botany,	26 Oct. 1892.
J. Falconer King and John Hunter, jointly,	Chemistry & Practical Chemistry,	17 May 1890.
R. F. C. Leith, M.B., B.Sc.,	Pathology, Prac. Pathology,	26 Oct. 1892. 13 June 1892.
H. D. Littlejohn, M.D.,	Med. Jurisprudence,	before 1861.
Stevenson Macadam, Ph.D.,	Chemistry & Practical Chemistry,	before 1861.
W. Ivison Macadam F.R.S.E.,	Chemistry & Practical Chemistry,	23 July 1888.
A. N. M'Alpine, B.Sc.,	Botany,	8 March 1880.
Chas. W. MacGillivray, M.D.,	Surgery,	22 January 1883.
Augustus A. Matheson, M.D.,	Midwifery,	15 May 1889.
Alexander G. Miller, M.D.,	Clinical Surgery,	3 August 1888.
R. Milne Murray, M.B.,	Midwifery,	13 August 1886.
J. Rymer Paterson, B.Sc.,	Pract. Chemistry, Chemistry,	3 August 1888. 29 Oct. 1888.
D. Nöel Paton, M.D.,	Physiology and Prac. Physiology,	24 Oct. 1887. 19 March 1888.
J. B. Readman, D.Sc.,	Practical Chemistry,	17 Dec. 1888.
William Russell, M.D.,	Pathology & Practical Pathology,	6 August 1887.
Johnson Symington, M.D.,	Anatomy and Practical Anatomy,	14 July 1879.
Ralph Stockman, M.D.,	Materia Medica & Prac. Materia Med.,	9 Dec. 188
J. Arthur Thomson, M.A.,	Natural History,	28 July 06.
Dawson F. D. Turner, M.D.,	Physics,	20 March 1893.
Roderick Urquhart,	Pract. Materia Med.,	12 Oct. 1885.
John Wyllie, M.D.,	Practice of Physic,	20 Dec. 1878.

GLASGOW.

John Barlow, M.D.,	Physiology, Prac. Physiology,	26 Nov. 1883. 8 January 1890.
A. M. Buchanan, M.D.,	Anatomy and Practical Anatomy,	12 Oct. 1874.
H. E. Clark,	Anatomy and Practical Anatomy,	30 January 1884.
Joseph Coats, M.D.,	Pathology,	11 Oct. 1875.
James Dunlop, M.D.,	Surgery,	12 Oct. 1874.
Samson Gemmell, M.D.,	Practice of Physic,	18 July 1881.

GLASGOW—*continued.*		*Date of Recognition.*
James M. Milne, Ph.D.,	Chemistry & Practical Chemistry,	30 July 1884.
Alexander Napier, M.D.,	Materia Medica,	22 April 1889.
E. E. Prince, B.A., F.L.S.,	Zoology,	15 June 1891.
Alex. Robertson, M.D.,	Practice of Physic,	15 June 1891.
	LONDON.	
G. B. Howes,	Natural History,	18 July 1887.
D. H. Scott, M.A., Ph.D.,	Botany,	18 July 1887.
T. E. Thorpe, Ph.D., F.R.S.,	Chemistry & Practical Chemistry,	9 Dec. 1889.
	NOTTINGHAM.	
J. W. Carr, M.A.,	Botany,	16 Jan. 1893.
Frank Clowes, D.Sc.,	Chemistry & Practical Chemistry,	9 Dec. 1889.
	OXFORD.	
Alfred Willson, Ph.D.,	Pract. Materia Med.,	29 Oct. 1888.
	SHEFFIELD.	
W. Carlton Williams, B.Sc.,	Chemistry & Practical Chemistry,	26 Nov. 1883.

RIGHTS OF THE GRADUATES IN MEDICINE AND SURGERY OF SCOTLAND ACCORDING TO THE MEDICAL ACT.

Before the passing of the Medical Act of 1858, the Degree of Doctor of Medicine granted by the Universities of Scotland (as the possessor underwent a complete education and examination in all departments of Medicine, Surgery, and Midwifery), qualified the Graduate to practise every branch of the Medical profession throughout Scotland. One principal purpose of the Medical Act was to extend local rights of practice over the whole of Her Majesty's dominions. But according to the hitherto accepted reading of a dubious clause in the Act, no one can practise both Medicine and Surgery without possessing two distinct Diplomas—

one for Medicine and another for Surgery. The Universities were thus compelled, in justice to their Graduates, to give them the additional title of Master in Surgery, not as implying any additional study or examination, but as declaring more distinctly their qualifications, and to permit Registration as regularly qualified practitioners in the whole field of their professional education. The Secretary for War some time ago issued an Order that candidates for admission into the Medical service of the Army should obtain their qualifications in Physic and Surgery from two different sources; the effect of which would have been to prevent any one University from qualifying for this purpose. The Scottish Universities' Commissioners, recognising the serious evils of such a system, followed up a remonstrance which had been offered on the part of the University of Edinburgh, and obtained the rescinding of all restrictions in the source of qualification. Consequently, any single University in Scotland can now qualify candidates for the Military and Naval Services as well as for any other public Medical service in the country.

B.—REGULATIONS FOR GRADUATION IN MEDICINE AND SURGERY, APPLICABLE TO ALL WHO COMMENCED THEIR MEDICAL STUDIES BEFORE 1ST OCTOBER 1892.

Three Degrees in Medicine and Surgery are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of Master in Surgery is not conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine.

These Degrees admit to the General Council of the University, and to the Medical Register. They qualify for Practice throughout Her Majesty's dominions, and for admission to the Military, Naval, and other Public Medical Services in the United Kingdom.

All Candidates must give evidence of having obtained a satisfactory General Education.

PRELIMINARY EXAMINATION.[1]

See Time-Table of Examinations, Dates for Entering and Payment of Fees, &c., pp. 122 *and* 123.

I. The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and the proficiency of Students in these branches is ascertained by examination, prior to the commencement of their medical study.

II. No candidate is admitted to a professional examination who has not passed a satisfactory examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place before the candidate has entered on his Medical Curriculum.

III. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all preliminary examination; and an Examination in Arts by any corporate body, whose examination has been recognised as qualifying for entrance on medical study by resolution of the General Medical Council of the United Kingdom, provided the said examination by the said corporate body shall be also approved by the University Court, shall exempt, *pro tanto*, from preliminary examination in Arts, on the subjects comprised in the said examination of the said corporate body.

PROFESSIONAL EDUCATION.

IV. No one is admitted to the DEGREES of BACHELOR of MEDICINE and MASTER in SURGERY who has not been engaged in Medical and Surgical study for four years—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two Courses of not less than one hundred lectures each, or by one such Course, and two Courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

V. Every candidate for the Degrees of M.B. and C.M. must give sufficient evidence by certificates—[2]

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[1] See footnote, p. 414.

[2] No Course of Lectures will be allowed to qualify unless the Lecturer certifies that it has embraced at least 100 lectures or 50 lectures, in conformity with the requirements of this section. Three Months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

1. That he has studied each of the following departments of Medical Science, viz.,

ANATOMY, CHEMISTRY, MATERIA MEDICA, INSTITUTES OF MEDICINE OR PHYSIOLOGY, PRACTICE OF MEDICINE, SURGERY, MIDWIFERY, and the DISEASES peculiar to WOMEN and CHILDREN; two Courses of Midwifery, of Three Months each, being reckoned equivalent to a Six Months' Course, provided different departments of Obstetric Medicine be taught in each of the Courses, GENERAL PATHOLOGY, or in Schools where there is no such Course, a Three Months' Course of Lectures on Morbid Anatomy, together with a Supplemental Course of Practice of Medicine or Clinical Medicine,	During Courses including not less than One Hundred Lectures.
PRACTICAL ANATOMY,	A Course of the same duration as those of not less than One Hundred Lectures above prescribed.[1]
PRACTICAL CHEMISTRY,	Three Months.
CLINICAL MEDICINE, CLINICAL SURGERY,	Courses of the same duration, as those of not less than One Hundred Lectures above prescribed, or Two Courses of Three Months, Lectures being given at least twice a week.
MEDICAL JURISPRUDENCE, BOTANY, NATURAL HISTORY, including ZOOLOGY,	During Courses including not less than Fifty Lectures.

2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons.

3. That he has attended during a Course of not less than fifty hours' instruction the Class of Practical Materia Medica and Pharmacy in the University of Edinburgh, or a similar class conducted in a University or recognised School of Medicine, or a similar Class conducted at the

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[1] Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for examination in Anatomy, with a view to a Degree, until they have dissected the human body at least once.

Laboratory of an Hospital or Dispensary, or elsewhere, by a Teacher recognised by the University Court under Section VI. Sub-section 4; or, that he has been engaged by apprenticeship,[1] for not less than two years, with a Registered Medical Practitioner, or a Member of the Pharmaceutical Society of Great Britain, or a Member of the Pharmaceutical Society of Ireland, or a Pharmaceutical Chemist, or Chemist and Druggist, registered under the provisions of the "Act for regulating the qualifications of Pharmaceutical Chemists, 1852," "The Pharmacy Act, 1868," or "The Pharmacy Act (Ireland), 1875," in the *bona fide* compounding and dispensing of Drugs, and the preparation of their officinal and other Preparations under his superintendence.

4. That he has attended, for at least six months, by apprenticeship or otherwise, the *out-practice* of an Hospital, or the practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.

5. That he has attended at least twelve cases of labour under the superintendence of a registered Medical Practitioner; or that he has attended six such cases, and also has attended for at least three months the practice of a Midwifery Hospital in which practical instruction is regularly given.

6. That he has attended, during courses of not less than fifty hours' instruction, Classes of Practical Physiology and Practical Pathology in the University of Edinburgh, or in a University or School of Medicine recognised by Sub-sections 2 and 4 of Section VI. of Ordinance No. 8, Edinburgh No. 3, or upon Classes thereof, conducted by a Teacher recognised by the University Court under the said Sub-section 4.

VI. The studies of candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following Regulations :—

1. One of the four years of Medical and Surgical study, required by Section IV., must be in the University of Edinburgh.

2. Another of such four years of Medical and Surgical study must be either in the University of Edinburgh, or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital, which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures as above prescribed.

4. One year's attendance on the Lectures of Teachers of Medicine in the Hospital Schools of London (including the Professors in the Faculty

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[1] Apprenticeship, Dispensary or Hospital Practice, Practical Midwifery, and Vaccination, &c., are not reckoned as *Classes* in making up an *Annus Medicus*.

of Science, in subjects required for graduation, in King's College and University College, London), or in the School of the College of Surgeons in Dublin, or of such Teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures as above prescribed.

5. Candidates may, to the extent of Four of the Departments of Medical Study required by Section V., Sub-section 1, attend in such year or years of their Medical and Surgical studies, as may be most convenient to them, the Lectures of the Teachers of Medicine specified in the foregoing Sub-section 4.

[Thus, Students of Medicine in the London Schools and in the School of the College of Surgeons in Dublin can obtain there two *Anni Medici* out of the four required for the Edinburgh Degrees in Medicine. Courses of Lectures in these Schools, and the Courses of the Medical Teachers and of the Science Teachers in King's College and in University College, London, in the Subjects of Graduation, are regarded as equivalent to Lectures on the corresponding subjects in this University, except Materia Medica and Midwifery, which, when only three months' Courses, are not received as equivalent. One *Annus Medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the Winter Session. Another *Annus Medicus* by attending either, (*a*), full Winter Courses on any two of the following subjects: Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (*b*), on one such Course and two three months' Courses on any of the following subjects: Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the Student selects the arrangement prescribed in (*a*), attendance on a third Course, although unnecessary to constitute an *Annus*, will also be accepted. The other subjects, and the additional Courses, not given in London or Dublin, necessary for the degrees of the University, require to be attended at this University.

In Provincial Schools, where there are no Lecturers recognised by the University Court, a Candidate can have only One *Annus Medicus*, and this is constituted by attendance on a Qualified Hospital along with a course of Practical Anatomy, but in a Provincial School where there are two or more Lecturers recognised by this University, a Second *Annus Medicus* may be made by attendance on at least two six months', or one six months' and two three months', recognised Courses.

6. All candidates not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that

purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

7. The Fee for attendance on the Lectures of an Extra-Academical Teacher in Edinburgh, with a view to Graduation, must be of the same amount as that exigible by Medical Professors in the University.

[*The Fee must be paid at the commencement of the Course.*]

8. No Teacher is recognised who is at the same time a Teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

9. It is not necessary for any Teacher, attendance on whose Lectures was recognised before 1861 for the purposes of Graduation in the University, to obtain a new recognition from the University Court; and attendance on the Lectures of every such Teacher will continue to be recognised as heretofore.

10. It is in the power of the University Court, if they shall see cause, at any time to withdraw or suspend the recognition of any Teacher or Teachers.

VII. Every Candidate must deliver, before the 31st day of March of the year in which he proposes to Graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year, [or that he will have completed it on or before the day of Graduation,] and that he will not be, on the day of Graduation, under articles of apprenticeship to any Surgeon or other master. (This declaration, along with a statement of studies, is appended to the Schedule for the Final Examination, and must be signed before the Schedule is given in.)

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

PROFESSIONAL EXAMINATIONS.

VIII. Each candidate is examined, both in writing and *viva voce*—*Firstly*, on Chemistry, Botany, and Natural History; *Secondly*, on Anatomy, Institutes of Medicine, Materia Medica [including Practical Pharmacy and Prescribing], and Pathology; *Thirdly*, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; *Fourthly*, Clinically on Medicine and on Surgery in an Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History [Materia Medica and Pathology] are conducted, as far as possible, by demonstrations of objects placed before the candidates.

IX. Students who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes : provided always that it shall be lawful for students to proceed to examination in the said subjects under one or more of the following sub-divisions, namely—(*a*) Botany and Natural History, (*b*) Chemistry (including Practical Chemistry), (*c*) Botany and Chemistry (including Practical Chemistry), or (*d*) Natural History and Chemistry (including Practical Chemistry), at the first period of examination after they have completed attendance on the relative classes ; and to proceed to examination in the remaining subject or subjects at a subsequent period of examination.

X. Students who have passed their examination on the first division of these subjects, may be admitted to examination on the second division at the end of their third year.

XI. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus.*

XII. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

[Thus, Candidates for the First Professional Examination, after they have completed attendance on the necessary Classes, may appear for Examination in all the subjects, or they may appear for Examination in one or more of the separate sub-divisions mentioned in Section IX. ; for the Second Professional Examination attendance for three complete *Anni Medici* is required ; and for the Final Professional Examination, four complete *Anni Medici* are required. Qualifying courses must have been attended on all the subjects of each division or sub-division of Examination previously to the Candidate being admitted to examination in that division.]

XIII. If any candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied, during another year, two of the prescribed subjects,[1] either in the University, or in some other School of Medicine.

XIV. After the candidate has satisfied the Medical Examiners, the Dean will lay the proceedings before the Senatus Academicus, by whose authority the candidate will be admitted on the first day of August, or, if that day be Sunday, then on the following day, to the Degrees of Bachelor of Medicine and of Master in Surgery.

XV. The Senatus Academicus, on the day here appointed will assemble at ten o'clock A.M., for the purpose of conferring Degrees ; and no candidate, unless a sufficient reason be assigned, shall absent himself, on pain of being refused his Degree for that year.

XVI. Candidates for Graduation are required to produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies.

DEGREE OF DOCTOR OF MEDICINE.

XVII. The Degree of DOCTOR OF MEDICINE may be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Master in Surgery, and is of the age of twenty-four years, and produced a certificate of having been engaged subsequently to his having received the Degrees of Bachelor of Medicine and Master in Surgery, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice:

Provided always that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified [Section III.], or unless he shall, before or at the time of his obtaining the Degrees of Bachelor of Medicine and Master in Surgery, or thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. of the Statutes relative to Preliminary Examination. Two of these must be Greek, and either Logic or Moral Philosophy, and the third must be one of the following subjects at the option of the Candidate—namely, French, German, Higher Mathematics, and Natural Philosophy.

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[1] Satisfactory Certificates must be produced as evidence of such study

And provided also that the candidate for the Degree of Doctor of Medicine shall submit to the Faculty of Medicine a Thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degrees of Bachelor of Medicine and Master in Surgery, which he may have made a subject of study after having received those Degrees. The Candidate must lodge his Thesis with the Dean on or before 30th April of the year in which he proposes to graduate. No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's and Master's Degrees; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.[1]

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new Statutes), but who cannot appear personally to receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

EXAMINERS.

XVIII. The Medical Examiners for all candidates for Graduation in Medicine are the Professors in the Faculty of Medicine, along with thirteen non-professorial Examiners appointed annually by the University Court.

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[1] Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only.

XIX. The provisions of these Statutes came into operation on the 4th of February 1861.

XX. Persons who began their medical studies before the 4th of February 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

The Regulations regarding Matriculation, Attendance on the necessary Classes, Class Examinations, Vaccination, &c., are the same as under the New Regulations.

FEES FOR DEGREES, &c. (OLD REGULATIONS).

Examination in Botany, Chemistry, Chemical Testing, Natural History,	5	5	0
Examination in Anatomy, Institutes of Medicine, Materia Medica, Prescriptions, Pathology,	5	5	0
Final Examination in Surgery, Midwifery, Practice of Physic, Medical Jurisprudence, Clinical Medicine (with Prescriptions), Clinical Surgery, during last Summer Session,	£10	10	0
Total Fees for M.B. and C.M. Diplomas,	£21	0	0
Additional Fee for M.D. Diploma,	£5	5	0
Government Stamp-Duty (for M.D. only),	10	0	0
Total Fees for M.D. Diploma,	£15	5	0
Matriculation Fee,	£1	0	0
Fee for Registration as a Member of the University General Council, if not already a Member,	1	0	0

In the event of the Candidate failing to pass any one of the Professional Examinations, the Fee is not returned ; but he may appear at one subsequent examination without paying an extra Fee, and at any future examination on paying a Fee of £2, 12s. 6d.

DATES OF EXAMINATIONS FOR PRESENTING CERTIFICATES, AND PAYING FEES FOR DEGREES UNDER OLD REGULATIONS,[1] &c.

The dates of the Examinations for 1893-94 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

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[1] See footnote, page 420.

PRELIMINARY EXAMINATION.

See Time-Table of Examinations, Dates of Entering, and Payment of Fees, pp. 122 *and* 123.

PROFESSIONAL EXAMINATIONS.

Candidates are required to present their Certificates for Examinations at the Office of the Faculty of Medicine, University (New) Buildings, and to pay the fees at the Matriculation Office. No fees will be received until the Candidates have shown all the Certificates required to be produced for the Examinations for which they propose to appear.

Candidates lodging statements of their Courses of Study with the Dean of the Faculty, will observe that for all Courses and Subjects of Study the Faculty will receive Certificates only as evidence of attendance.

FIRST PROFESSIONAL EXAMINATION.

Practical Chemistry—15th July 1893, and following days; and 24th March 1894, and following days, at hours to be announced.

Written Examinations—17th July 1893 and 26th March 1894—Chemistry at 10 o'clock; Botany at 1 o'clock. 18th July 1893 and 27th March 1894—Natural History at 10 o'clock.

Oral Examinations begin 18th July 1893 and 27th March 1894.

Names to be given in, Certificates shown, and Fees paid on or before 8th July 1893, and on or before 19th March 1894.[1]

SECOND PROFESSIONAL EXAMINATION.

Written Examinations—19th July 1893 and 30th March 1894—Anatomy at 10 o'clock; Physiology at 1 o'clock, each day. 20th July 1893 and 31st March 1894—Materia Medica at 10 o'clock; Pathology at 1 o'clock, each day.

Oral Examinations begin on 20th July and 31st March.

Names to be given in, Certificates shown, and Fees paid on or before 10th July 1893, and on or before 24th March 1894.[1]

FINAL PROFESSIONAL EXAMINATION.

Clinical Examinations in Surgery begin on 1st May, and in Medicine on 2nd May 1893.

Written Examinations—12th June 1893—Practice of Physic, 10 o'clock; Medical Jurisprudence, 1 o'clock. 13th June—Surgery, 10 o'clock; Midwifery, 1 o'clock; Prescriptions at 3.30 o'clock.

Oral Examinations begin 14th June.

Names to be given in, Certificates shown, and Fees paid for the Examination in 1893 on or before 18th April 1893, and for the Examination in 1894 on or before 17th April.[1]

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[1] See footnote 1, page 420.

Theses for M.D. to be given in, Certificates shown, and Fees paid on or before 30th April 1894, and Stamp Duty to be paid on or before 15th July.[1]

GRADUATION.

Tuesday, 1st August 1893, at 10 A.M. Candidates to assemble at 9 A.M.

THOMAS R. FRASER, M.D.,
Dean of the Faculty of Medicine and
Professor of Materia Medica.

DOCTORS OF MEDICINE

WHO HAVE BEEN AWARDED GOLD MEDALS FOR THEIR THESES FROM 1888 TO 1892, BOTH YEARS INCLUDED.[2]

1888.

James Graham, Scotland
John Berry Haycraft, England
George Mackay, Madras

1889.

Herbert H. Ashdown, England
John W. Ballantyne, Scotland
Arthur J. M'D. Bentley, England
Kenneth M. Douglas, Scotland
Thomas A. Helme, England
Henry Alexis Thomson, Scotland
Joseph Tillie, Scotland
Herbert F. Waterhouse, England

1890.

Joseph Griffiths, Wales
Robert Muir, Scotland
George Edmund Pierez, Ceylon
W. G. A. Robertson, Scotland
Arthur Robinson, England
John David Williams, Wales

1891.

Edmund W. W. Carlier, England
Vaughan Berkeley Harley, England
David Hepburn, Scotland
Alexander Miles, Scotland
James Ritchie, Scotland
George Neil Stewart, Scotland
John Clarence Webster, Canada

1892.

George Sandison Brock, Scotland.
Alex. Lockhart Gillespie, Scotland
William Aldren Turner, Scotland
Arthur John Whiting, England
Theodore Stacey Wilson, England

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[1] See footnote, page 420.

[2] The names of those who received Gold Medals prior to 1859 will be found in the List of Graduates in Medicine of the University of Edinburgh since its foundation, published in 1867, and the names of those who received Gold Medals from 1869 to 1889, both years included, will be found in the Historical Appendix to List of Graduates, published in 1889, pp. 128, 129.

DOCTORS OF MEDICINE, WITH THE TITLES OF THEIR THESES, WHO GRADUATED ON 1ST AUGUST 1892.

*** *Obtained Gold Medals for their Dissertations.*

** *Deemed worthy of competing for Gold Medals.*

* *Commended for their Dissertations.*

Robert Dunlop Reid Allison, Scotland, M.B., C.M. (with Second-Class Honours), 1889. Vesical Calculus: its Etiology, Varieties, Diagnosis, and Treatment, with Historical Sketches and Geographical Distribution.

Gilbert Taylor Beatton, Scotland, M.B., C.M., 1887. The Complications of Scarlet Fever.

*** George Sandison Brock, Scotland, M.B., C.M. (with Second-Class Honours), 1880. Bilharzia Hæmatobia.

** Alfred Walter Campbell, Australia, M.B., C.M., 1889. Alcoholic Neuritis: its Clinical Features and Pathology.

5** Henry Maurice Chasseaud, Asia Minor, M.B., C.M., 1890. Intra-Ocular Injections: an Experimental Study.

* Henry Martyn Clark, India, M.B., C.M., 1881. Observations concerning Malaria, especially as met with in Indian Practice.

Edmund Wearne Clarke, England (B.Sc.), M.B., C.M., 1885. On Appendicitis: with special reference to Diagnosis.

* Frank Gerard Clemow, England, M.B., C.M. (with Second-Class Honours), 1885. Some Recent Suggestions for the Treatment of Pulmonary Consumption.

Joseph Osborne Closs, Scotland, M.B., C.M., 1882. Dysmenorrhœa and Oöphoritis.

10* George Matheson Cullen, Scotland, M.B., C.M., 1889. The Human Thyroid Gland: its Early Literature, its Anatomy and Histology, with some Considerations with regard to its Functions.

James Adam Dick, Australia (B.A.), M.B., C.M., 1890. Obstetrical Palpation: the Art of Palpation applied to the Diagnosis of Obstetrical Conditions.

William Doig, Scotland, M.B., C.M., 1881. The Diagnosis of Extra-Uterine Pregnancy before Rupture, and its Treatment.

** Edward Henry Ezard, England, M.B., C.M., 1887. The Transmission of Tuberculosis to Man from Domestic Animals by the Agency of Food Substances derived from them.

* Richard John Fox, India, M.B., C.M., 1887. On certain Morbid Fears, with

Remarks on the Influence of Fear on Disease.

15 Edmund Valentine Gibson, England. M.B., C.M., 1890. Fifty Cases of Sciatica treated by Acupuncture, with Analysis and Remarks.

*** Alexander Lockhart Gillespie, Scotland, M.B., C.M., 1888. Gastric Digestion: an Experimental and Clinical Study of some Points with regard to the Peptic Digestion of Proteida.

* William Winslow Hall, India, M.B., C.M., 1884. Essay towards Determination of the Peculiarities of Cancerous Epithelium.

* Arthur Herbert Hallen, England, M.B., C.M., 1889. The Climate of the Western Intertropical Coast Regions of Africa.

* John George Havelock, England, M.B., C.M., 1887. The Brain in 800 Cases of Insanity.

20* Joseph Hay Keay, Scotland (M.A.), M.B., C.M., 1876. The Recent Literature of Indigestion.

James Tyson Kitchin, Eng., M.B., C.M., 1887. Typhus Fever in Whitehaven, with Recollections of a Personal Attack in 1890.

* George Leslie, Scotland, M.B., C.M. (with Second-Class Honours), 1881. The Physical Relations of Idiocy and Imbecility.

* William Lockwood, England, M.B., C.M., 1888. On the Antiseptic Treatment of Typhoid Fever.

* Alexander James MacGregor, Scotland, M.B., C.M., 1888. Historical Landmarks in the Treatment of Insanity.

25 Norman James M'Kie, England, M.B., C.M., 1887. Spurious Biliary Colic.

* Charles William Stanford Magrath, England, M.B., C.M., 1880. Some Observations on the Use of Salol in Typhoid Fever.

Charles John Linskill Mansel, England, M.B., C.M., 1889. Ophthalmia.

Edward Forster Maynard, England, M.B., C.M., 1889. Malignant Endocarditis.

Robert Thornton Meadows, Canada, M.B., C.M., 1885. Diphtheria as a Primary Local Infective Disease, and the Treatment of Severe Post-Diphtheritic Paralysis by the Subcutaneous Injection of Strychnia.

30 William Gordon Mitchell, Scotland (M.A.), M.B., C.M., 1885. Exophthalmic Goitre.

Basil Gordon Morison, India, M.B., C.M. (with First-Class Honours), 1878. The Pathology and Treatment of Abortion.

Andrew Watson Munro, Scotland, M.B., C.M., 1883. Leprosy, with Special Reference to its Outbreak in Australia.

William Murray, Scotland, M.B., C.M., 1879. The Relation of Environments to Disease among Colliers as exemplified at Park-field during the years 1889-1892.

Augustus Beauchamp Northcote, England, M.B., C.M., 1888. Influenza, with Special Reference to the Hull Epidemic of 1891.

35 John William Pare, England, M.B., C.M., 1885. New Zealand as a Sanitorium for the Invalid from Pulmonary Disease, and the Constitutionally Weak.

William Maskelyne Parham, England, M.B., C.M., 1889. Coma: Its Clinical and Practical Aspects.

* John Playfair, Scotland, M.B., 1872. Hysteria in Children.

** Thomas Dobson Poole, England, M.B., C.M., 1889. Vaccination Eruptions.

Roland James Pope, Australia (B.A.), M.B., C.M., 1890. Modern Therapeutics of Certain Ocular Affections.

40**James Russell, Scotland, (M.A.), M.B., C.M., 1888. Study of Lead Poisoning.

Charles Butler Beck Savory, England, M.B., C.M., 1888. Cause and Effect in Relation to the Symptoms and Signs of Scarlet Fever.

* James Bertie Simpson, Scotland (M.A.), M.B., C.M., 1887. Puerperal Fever: its Etiology and its Prophylaxis.

George Arbuthnot van Someren, Scotland, M.B., C.M., 1882. Brief Account of an Epidemic of Influenza, so-called, occurring in Orange, New South Wales, as seen in Practice.

George Henry Hamilton Symonds, England, M.B., C.M., 1884. Beriberi or Kakke, an Endemic Disease of the Peripheral Nervous System.

45 William Evans Thomas, Wales, M.B., C.M., 1885. On Influenza.

Isaac Thompson, England, M.B., C.M. (with Second-Class Honours), 1888. Epidemic Influenza, with Special Reference to the Epidemic of 1889-1892.

John Christopher Thomson, Scotland (M.A.), M.B., C.M. (with Second-Class Honours), 1888. The History and Present Position of Chinese Surgery: Surgical Characteristics of the Chinese; and the Prospects of Western Surgical Practice in China.

George Thornton, England, M.B., C.M., 1890. Chronic Gastric Dyspepsia, with Special Reference to the Removal and Examination of a Portion of the Contents of the Stomach during Digestion as an aid in the Diagnosis and Treatment of the Disease.

* Alfred Turner, England, M.B., C.M., 1885. Asylum Therapeutics, 1892.

50***William Aldren Turner, Scotland, M.B., C.M. (with First-Class Honours), 1887. Observations on the Anatomy and Phsiology of the Central Nervous System.

Thomas Walcot, England, M.B., C.M., 1887. The Etiology, Pathology, and

Diagnosis of Diphtheria, with Notes of Fifteen Original Cases.

* Edward Walker, England, M.B., C.M. (with First-Class Honours), 1884. Our Present Knowledge of the Condition of Fever.

Thomas Hamilton Ward, England, M.B., C.M. (with First-Class Honours), 1887. Notes on the Use of some Hypnotics in Asylum Practice.

William Muir Crawford Watson, Scotland, M.B., C.M., 1888. Dissertation on a Case of Primary Ventricular Hæmorrhage.

55 Sidney Roberts Webb, England, M.B., C.M., 1890. Influenza: an Historical, Etiological, Clinical, and Therapeutical Inquiry.

William Henry Weston, England, M.B., C.M., 1882. Artificial Anæsthesia.

*** Arthur John Whiting, England, M.B., C.M., 1889. Contributions to the Comparative Histology and Experimental Physiology of the Spleen, with Observations on Blood Formation.

*** Theodore Stacey Wilson, England (B.Sc.), M.B., C.M. (with Second-Class Honours), 1883. Original Research into Cardiographic and Clinical Evidence as to the Character of the Diastolic Expansion of the Ventricles, &c.

Arthur Benjamin Winder, England, M.B., C.M., 1884. Plumbism in Huddersfield from Lead-Polluted Water.

60 * Robert Wise, Scotland, M.B., C.M., 1888. Headache: a Clinical Study.

GRADUATES (M.B., C.M.) WHO HAVE PASSED THE EXAMINATIONS WITH HONOURS FROM 1888 TO 1892, BOTH YEARS INCLUDED.[1]

1888.

Class I.

Louis Edw. Barnett, N. Zealand
Thomas Watts Eden, England
Robt. Alex. Fleming (M.A.), Scot.
William Fordyce (M.A.), Scotland
John Montgomery, Scotland
Robert Muir (M.A.), Scotland

Class II.

William Andrew Betts, England
Robert Edie, Scotland
Sydney Jamieson (B.A.), Australia
Stephen Moister Laurence, West Indies
William George Laws, England
Frederick John M'Cann, Scotland
Jas. Middlemass (M.A., B.Sc.), Scotland
James Ritchie (M.A.), Scotland
James Smuts, Cape Colony
John Somerville, New Zealand
Isaac Thompson, England
John Christopher Thomson (M.A.), Scotland
James Henry Traquair, Scotland

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[1] For names of those who received the Degrees with Honours prior to 1889, see Historical Appendix to List of Graduates of the University, published in 1889, pp. 129-132.

Ninian George Trotter, N. Zealand
Dawson Fyers Duckworth Turner (B.A.), England
John Clarence Webster (B.A.), Canada
John David Williams, Wales

1889.

Class I.

Robert Oswald Adamson (M.A.), Scotland
John William Crerar, Scotland
William Fred. Farquharson, Scot.
James Lackie, Scotland
Jas. Hill Williamson Laing (M.A., B.Sc.), Scotland
Hamilton Graham Langwill, Scot.
Alexander Maclean, Scotland
Eustace G. Pilgrim, Barbados
Wm. Gordon Woodrow Sanders, Scotland
James Andrew Thyne, Scotland
George Wilkinson, England

Class II.

Robert Dunlop Reid Allison, Scot.
William Everett, England
George Alfred Walter, England
Colin Gordon, England
Ewan John Maclean, Wales
James Monteith, Scotland
Benjamin Sweeten, Scotland
C. N. C. Wimberley, Scotland

1890.

Class I.

Charles James Whitehead Dixon, England
Carstairs Cumming Douglas, Scotland
Gerald Fitzgerald, Scotland
Robert Main Horne, Scotland
Colin Forbes Lees, Scotland
William Paterson, Scotland
George William Thompson, La Plata
William Kerr Walker, Scotland

Class II.

Edward Henry Alexander, New Zealand
Robert Brown, Scotland
John Wheeler Dowden, Ireland
George Balfour Marshall, Scotland
Arnold Winkleried Williams, England

1891.

Class I.

John Wardle Bone, England
Wm. Blackley Drummond, Scot.
George Elder, Scotland
Edward Barnard Fuller, Africa
Henry Baker Hall, England
George Hennan, Scotland
Herbert Saunders Wansbrough Jones (B.Sc.), Wales
Harry Rainy (M.A.), Scotland

Class II.

Robert Johnston Ashton (B.A.), England
Robert Cran, Scotland
Frederich Wilhelm Eurich, Saxony
David J. Mackenzie (M.A.), Scot.
John Orr, Scotland
David Stuart, Scotland
Wm. J. Walker (B.A.), Australia
Neish Park Watt (M.A.), Scotland
John Thos. Wilson, Tasmania

1892.

Class I.

Alexander Brownlie, Scotland
Charles Cromhall Easterbrook, (M.A.), England
George Home, New Zealand
Lim Boon Keng, Singapore
Robert Murray Leslie (M.A., B.Sc.), Scotland
Donald Macaulay (M.A.), Scot.

Class II.

Alexander Douglas (M.A.), Eng.

Daniel Charles Edington, Scot.
John James Evans, Wales
Arthur Fells, England
James Stewart Fowler, Scotland
Robert Walker Gray, Scotland
Robert John Johnston, Scotland
George Wm. Falconer Macnaughton, Scotland
Philip Oscar Malabre, Jamaica
Peter William Shaw, Scotland
Alfred George Talbot (B.A.), New Zealand
George Templeton, Scotland

BACHELORS OF MEDICINE AND MASTERS IN SURGERY.

Small CAPITALS *indicate First-Class Honours.*

Italics Second-Class Honours.

Robert Edward Adamson, England
James Allan, Scotland
George Wayland Ancrum, England
James Shirras Anderson (M.A.), Scotland
5 Robert Henry Armstrong, England
George Joakim Bagram, Armenia
Thaddeus Barleycorn Barber, West Coast of Africa
George Fleming Barnardo, England
Thomas Matthias Bassano, England
10 Lewis Beaton Beddie (M.A.), Scotland
George Bell, England
Henry Porter D'Arcy Benson, Australia
John James Beveridge (M.A.), Scotland
George Bill, Australia
15 Charles Hubert Bond, Eng.
Dugald Charles Bremner, Scotland
John Chalmers Brown, Scot.
Thomas M'Lachlan Brown, Scotland
Hablot John Moxon Browne, England
ALEXANDER BROWNLIE, Scot.
William M'Queen Brunton, Scotland
David Haitly Burn, Scotland
Frank Sydney Butler, Cape Colony
George Butters, Scotland
25 Donald Graham Campbell, Scotland
William Sibbald Campbell, Scotland
John Ferguson Carruthers, Scotland
James Goodfellow Christie (M.A.), Scotland
Pieter Gideon Cilliers, Cape Colony
30 Frank Herbert Aylen Clayton, England
George Herbert Cock, Eng.
Herbert Davis Coles, England
Anthony Bridges Jesser Coope, England
Robert Aitchison Corson, Scot.
35 Samuel George Davidson (M.A.), Scotland
Richard Davies, England
John Lawson Dick, Scotland
George Dickson, Scotland
Edward Cyril Dobie, England
40 Charles William Donald, Scot.
Alexander Douglas (M.A.), England
William Ernest Dubourg, Scotland

CHAS. CROMHALL EASTERBROOK (M.A.), England
Daniel Charles Edington, Scotland
45 Frank Leigh Ehrke, England
John James Evans, Wales
Rufus Easson Evans, Eng.
Frederick Macfarlane Fellows, England
Arthur Fells, England
50 Thomas Fentem, England
William Fletcher, England
Ernest George Fortune, Scot.
James Stewart Fowler, Scot.
Martin Hugh Foye, Ireland
55 James Alexander Fullarton (B.A.), New Zealand
Edward Blake Garland, Eng.
William Scott Gibb, Scotland
William Gordon, England
William Baxter Gow, Scot.
60 *Robert Walker Gray*, Scotland
William Gray, Scotland
Vincent Green, England
William Herbert Gregory, England
Ernest Elias Tidboald Badcock Greville, England
65 George Kerr Grimmer(B.A.), Canada
Robert Lyall Guthrie (M.A.), Scotland
Thomas Clement Guthrie, Scotland
Herbert Howard Hadden, Ireland
George Halley (M.A.), Scot.
70 John Archibald Hamilton, Scotland
Frederick John Hare (B.Sc.), England
Leonard Ernest Hardy, New Zealand
Edgar Hawkins (M.A.), Eng.
Wallace Ellwood Haworth, New Zealand
75 Alexander Hendry, Scotland
David Bennie Hewat, South Africa
Harold M'Donald Hewer, England
John Russell Higson, England
Gustave Heuze Hogg, Tasmania
80 GEORGE HOME, New Zealand
Arthur Henry Hopkins, Ireland
Cornelius John Hugo, Cape Colony
George Frederick Hulme, England
Frank Hope Grant Hutchinson, England
85 Alexander Ingram, Scotland
Louis Godfrey Irvine (M.A.), Scotland
Sir Bhagvat Sinh Jareja, India
James Hunter Johnston, Eng.
Robert John Johnston, Scot.
90 George Johnstone, England
Howell Buckland Jones, Wales
LIM BOON KENG, Singapore
Robert Knox, Scotland
James Thomas Currie Laing, Scotland
95 William Duncan Lawrie, Eng.
ROBERT MURRAY LESLIE (M.A., B.Sc.), Scotland
John Ravensworth Liddell, Scotland
Edward Sydney Littlejohn (B.A.), Australia
Percival Vincent Locke, Penang
100 William Forrest Macarthur, England
DONALD MACAULAY (M.A.), Scotland
James M'Clew, Scotland
John M'Clymont, Scotland
James M'Donald, Scotland
105 Alexander M'Ewen, Scotland
James Gray Macindoe, Scot.

James M'Kerrow, England
William Harrison Mackinlay, England
James Maclean (M.A.), Scot.
110 John Macmillan (M.A., B.Sc.), Scotland
Adam Henry Muir Macmorran, Scotland
George William Falconer Macnaughton, Scotland
Philip Oscar Malabre, Jamaica
Gustav Mann, India
115 John Little Martin, England
George Brand Mathieson, Scotland
Raymond Maxwell, Tasmania
Alexander Jamieson Meikle, Scotland
David Melville, Scotland
120 Charles Killick Millard, Eng.
Ahmed Mirza, India
Alexander Mitchell, Scotland
George Benjamin Mitchell, Scotland
Alexander Ray Moon, Scot.
125 James Ernest Moorhouse (M.A., B.Sc.), England
John Morison, Scotland
Gerhardt Cornelius Munnik, Cape Colony
James Hay Murray, Scotland
Muthyala Govindurajulu Naidu, India
130 George Newman, England
Edward M'Killop Nicoll, India
John M'Donald Nicoll, Scot.
Percy Wood Nicol, Scotland
Athelstane Nobbs, England
135 Thomas Edward Nuttall, Eng.
Lloyd John Hollis Oldmeadow, Tasmania
Charles Parker, Tasmania
William Henry Parkes, New Zealand
David William Horn Paterson, Scotland
140 Charles Ross Pearce, England
George Peterkin, England
Reginald Ogilvy Petrie (M.A.), Scotland
William Henry Pimblett, Eng.
George Wilfred Pollard, Eng.
145 Charles Frederick Ponder, Scotland
George Porter, England
Robert Proudfoot, Scotland
William Graham Putnam, (B.A.), Nova Scotia
John Robert Musgrave Rae, England
150 Matthew Alexander Reid, Australia
William Nathaniel Robertson, Scotland
Oswald Dykes Robson (M.A.), England
William Rogers, England
Henry Armitage Rowland, England
155 James Lawson Russell, Scotland
Peter Wollstadt Schmidt, Eng.
William Scott (M.A.), Scot.
Raoul Seheult, Trinidad
William Grant Sellar, Scot.
160 James Brownlee Shaw, Scot.
Peter William Shaw, Scot.
Constantine Demetrius Simitopoulos, Smyrna
Alexander Tweedie Simpson, Scotland
Walter Petrie Simpson, Scot.
165 Herbert James Slane, India
Thomas George Sloan (M.A.), Scotland
Andrew Scott Smith (M.A.), Scotland
William Ramsay Smith (B.Sc.), Scotland
William Somerville, Scot.
170 William Spettigue, England
William Sproule, New South Wales

James Stoddart, (B.A.) Scotland.
Alexander Stuart, Scotland
James Sutherland, New Zealand
175 *Alfred George Talbot* (B.A.), New Zealand
Matthew Wright Talbot, Eng.
George Templeton, Scotland
Cuthbert Thompson, Ireland
James Livingstone Thompson, Australia
180 Charles Thomson, India
Henry Torrance Thomson, Scotland
Walter Tibbits, England
Francois James du Toit (B.A.), Cape Colony
Robert Meeser Truter, South Africa
185 Dnyaneshwar Atmaram Turkhud, India
Charles Campbell Baxter Tyrie, Scotland
Andrew Walker (M.A., B.Sc.), Scotland
John Wallace, Scotland
James Monteith Walls, Scot.
190 Alexander Edward Watson, Scotland
Douglas Chalmers Watson, Scotland
James Kenneth Watson, Eng.
Edward John Weightman, England
Victor Werdmüller, Cape Colony
195 John Robert Whait, England
William John White, Scot.
Harry Whittome, England.
Robert Morris Williams, Wales
John Clark Wilson, Scotland
200 John Wilford Wilson, Eng.
Ludovic Unwin Young, Scot.
Meredith Young, England
William Young, New Zealand

27TH OCTOBER.

William Corsar Anderson, Scotland.
Arthur Reginald Bankart, Wales
Frederick Morrison Black, Scotland
Nathaniel Troughton Bond, England
5 William John Walter Winfield Borthwick, Scotland
John William Parker Boyd, Scotland
Albert Cameron, Scotland
Archibald Nathaniel Shirley Carmichael, Scotland
James Ojoye Coker, Africa
10 James Cowie, Scotland
Victor Mackay Daly, India
Robert Hugh Drennan, Ireland
Alexander M'Beth Elliot, Scotland
John Robert Foster, England
15 David Fraser, Wales
Murray Gillespie, Scotland
Thomas Arthur Granger, Scotland
Percy Frere Grant, Scotland
Frederick Thresher Griffin, England
20 Josiah Field Hall, England
Arthur Ainslie Hudson, England
John Edmund Knox, England
Henry Latham, England
Andrew Thomson Law, Scotland
25 William Lawton, England
Arthur William Bligh Livesay, England

George Francis Longbotham, England
David William Knyvett Lyall, India
Alexander Minto M'Donald, Scotland
30 James MacFarlane, Scotland
Angus Vallance M'Gregor, Scotland
Murdo Mackay (M.A.), Scotland
William Crawfurd Macknight, Australia
William M'Lean, Scotland
35 Thomas Muirhead Martin, Scotland
Charles Edmund Maude (B.A.), New Zealand
Rodon Tregarthen Michell, India
John Oswald Morrison, Scotland
Donald George Macleod Munro, Scotland
40 Andrew Newall (B.A.), Scotland
Aclan Anderson O'Hara, Australia
John Owen, Wales
Malcolm Parkinson, England
Horace James Pechell, England
45 John Donald Pollock, Scotland
Walter Midgley Robertshaw, England
Arthur Clement Stamberg, India
Cecil Edward Stephens, England
John Bell Thomson, New Zealand
50 Frederick Richard Van Langenberg, Ceylon
Alban Ward, England
Alfred John Wheatley, England
Charles Webster Williams, Wales
Griffith Jones Williams, Wales
55 James Gordon Williamson, India

28TH JANUARY 1893.

Joseph Percy Stephen Barboza, India
John William Craig, Scotland
Samuel Davidson, Scotland
Robert Burnet Gass, England
5 George Stephenson Shirt Hirst, England
Habeeb Hennain Khayatt, Egypt
Henry Cairns Lloyd, Australia
Thomas Gowans Macormack (M.A.), Scotland
Ernest Christian Quertier, England
10 George Percy Richards, England
Frederick William Morris Stephenson, England
Arthur Harry Hingston Vizard, England

13TH APRIL.

John Richardson Armstrong, Wales
Francis Ernest Gunter, India
Frederick William Sydenham England

Class Prize Lists.

1892-93.

BOTANY.

SUMMER SESSION, 1892.

SENIOR DIVISION.

SECOND-CLASS HONOURS.—E. M. Beilby, Scotland.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. William Watson, Kirkcudbright ; 2. John Hunter Henderson, Edinburgh, and J. W. Paterson, Scotland—equal ; 4. C. J. Gorringe, Tasmania, Walter Hardie, Edinburgh, and Edwin Matthew, Nairn—equal (*Medallists*) ; 7. David R. Rowlands, Llanrhaiadr ; 8. R. M'W. Leith, Cape Colony, and O. St John Moses, Calcutta—equal.

SECOND-CLASS HONOURS.—10. William Adamson, Kirkcudbrightshire ; Robert Affleck, Galloway ; E. Harries Jones, Rhyl, North Wales ; and James Watt, New Zealand—equal ; 14. George James Blackmore, Canterbury, N.Z., and Arthur Dickson, Scotland—equal ; 16. George Burns, Mid Lothian, and Robert Lees, Ayrshire—equal ; 18. Edwin C. Jack, Glasgow ; 19. A. Lewis Husband, England, and F. Bedingfeld Macdonald, Scotland—equal ; 21. James Gray, Scotland ; 22. William H. Borrie, Dunedin, N.Z. ; G. P. Henderson, Redcar ; and C. B. Crampton, England—equal ; 25. J. Brunton Blaikie, Roxburghshire ; William Lillie, India ; and George Carmichael Low, Scotland—equal ; 28. C. W. Eames, Sheffield ; and John Gilmour, Burntisland—equal ; 30. B. L. Livingstone Learmonth, Australia ; 31. Charles Monro Hector, Wellington, N.Z., and J. P. Hunter Paton, Duddingston—equal ; 33. C. M. Cooper, England, and A. D. Yule, Arbroath—equal ; 35. Frederick Gardiner, Edinburgh ; S. C. Mahalanobis, Calcutta ; and James Stenhouse, Edinburgh—equal ; 38. A. Y. Greenwood, India, and A. Ritchie Scott, Edinburgh—equal ; 40. Theodore R. W. Armour, Edinburgh ; A. G. M'Calman, South Australia ; and James Nicol, Strathmiglo—equal ; 43. John Brebner Cusine, Glasgow ; 44. James Davidson, Berwick-on-Tweed, and T. Arthur Ross, Edinburgh—equal.

WINTER SESSION, 1892-93.

SENIOR DIVISION.

SECOND-CLASS HONOURS.—1. Lawson M. Cairns, Galashiels ; 2. T. B. Shoolbread, Portsmouth.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. J. J. L. Macfarlane, Polmont (*Medallist*); 2. David D. Gold, Kettle, Fife.

SECOND-CLASS HONOURS.—3. David M. Smart, Forfarshire; 4. James Allison, Lanarkshire; 5. George F. Waterston, Forfar.

PRACTICAL BOTANY.

SUMMER SESSION, 1892.

CLASS A.

FIRST-CLASS HONOURS.—1. F. Bon Feast, England, and G. P. Henderson, Redcar—equal (*Medallists*); 3. A. Lewis Husband, England.

SECOND-CLASS HONOURS.—4. C. J. Gorringe, Tasmania; 5. James Gray, Dundee, and F. S. Corbett Thompson, Australia—equal; 7. S. C. Mahalanobis, Calcutta; W. T. Ritchie, Edinburgh; and Robert Selby, Kirkcowan—equal.

CLASS B.

FIRST-CLASS HONOURS.—1. James A. Murray, Mid-Lothian; 2. William Watson, Kirkcudbright (*Medallists*); 3. B. L. Livingston Learmonth, Australia, and J. Gillon Ross, Calcutta—equal; 5. John Bremner, Cusine, Glasgow.

SECOND-CLASS HONOURS.—6. Walter Hardie, Edinburgh, E. Harris Jones, Rhyl, and William W. Wood, Leith—equal; 9. Duncan M. Mackay, Hull, T. H. Macfie, Edinburgh, and Edward J. Taylor, Scotland—equal; 12. F. O. de Souza, Straits Settlements; 13. William H. Hill, Kelso, and T. Herbert Stevenson, Londonderry—equal.

FOR MICROSCOPICAL SECTIONS MADE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. William Watson, Kirkcudbright; 2. S. C. Mahalanobis, Calcutta, and H. Hutchinson, Bristol—equal; 4. J. Gillon Ross, Calcutta, and James A. Murray, Mid-Lothian—equal (Prizes); 6. F. Bon Feast, England.

SECOND-CLASS HONOURS.—7. B. L. Livingston Learmonth, Australia, and Duncan M. Mackay, Hull—equal; 9. W. T. Ritchie, Edinburgh; Walter Hardie, Edinburgh; James Gray, Dundee, and A. Lewis Husband, England—equal.

FOR DRAWINGS ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. S. C. Mahalanobis, Calcutta; 2. William Watson, Kirkcudbright (Prizes.)

SECOND-CLASS HONOURS.—3. A. Lewis Husband, England; 4. William H. Hill, Kelso, and D. Gilbert M. Teague, Melbourne—equal; 6. W. R. Mander, Woolwich.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. James Allison, Lanarkshire (*Medallist*); 2. J. J. L. Macfarlane, Polmont, and D. M. Smart, Forfarshire—equal.

SECOND-CLASS HONOURS.—4. A. R. Wight, Windygates, F. M. Purchas, New Zealand, and D. D. Gold, Kettle, Fife—equal; 7. J. A. Shoolbread, Portsmouth, and T. B. Shoolbread, Portsmouth equal.

FOR MICROSCOPICAL SECTIONS MADE DURING THE SESSION.

FIRST-CLASS HONOURS.—F. M. Purchas, New Zealand (*Prize.*)

SECOND-CLASS HONOURS.—J. A. Terras Bell, New Zealand.

FOR DRAWINGS ILLUSTRATING WORK DONE DURING THE SESSION.

SECOND-CLASS HONOURS.—W. J. Veecock, British Guiana.

I. BAYLEY BALFOUR, M.D., D.Sc., *Professor.*

NATURAL HISTORY.

SUMMER SESSION, 1892.

SENIORS.

FIRST-CLASS HONOURS.—1. J. A. Murray (*Medallist*): 2. D. G. M. Teague.

JUNIORS.

FIRST-CLASS HONOURS.—1. T. A. Coward, C. B. Crampton, J. F. Holden, and A. L. Husband—equal (*Medallists*).

SECOND-CLASS HONOURS.—5. G. C. Low, F. R. Momplé, and W. Wood--equal; 8. F. H. Merry, O. St J. Moses, and R. Mudie—equal; 11. T. S. Church and J. W. Edwards—equal; 13. P. C. Luttig, C. MacLaurin, Ed. Matthews, and J. D. Slight—equal; 17. W. Evans, G. W. Miller, and A. D. Yule—equal; 20. C. A. D. Lauder and W. H. Robb—equal; 22. R. G. Ralston; 23. W. H. Forester and F. B. Macdonald—equal; 25. R. Godfrey and J. Stenhouse—equal; 27. D. A. Cameron, A. Dickson, and F. M. Simmonds—equal; 30. A. J. Buchanan, C. M. Cooper, and D. R. Rowlands—equal; 33. J. Ballantyne, T. M. Callender, J. M. Coats, and J. Gray—equal; 37. W. H. Borrie, C. H. Kruger, and A. R. Scott—equal; 40. Fred. Gardiner, W. R. Mander, A. H. Rutherford, and R. Thornton—equal.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. J. H. Gordon and W. Hamilton—equal (*Medallists*).

SECOND-CLASS HONOURS.—3. A. Gibson; 4. T. B. Shoolbread; 5. J. S. Fraser; 6. J. Boyd Jamieson, J. F. L. Macfarlane, and J. A. Shoolbread—equal; 9. H. R. Philips; 10. T. D. M'Laren; 11. Geo. H. List and C. H. Johnson—equal; 13. F. M. Parry and

L. C. Saldanha—equal ; 15. Geo. Gatenby and G. F. Waterston —equal ; 17. R. Craven and F. N. Purchase—equal ; 19. H. N. Chambers and R. Hill—equal.

PRACTICAL ZOOLOGY.

Summer Session, 1892.

First-Class Honours.—1. H. S. Brookway, A. H. Rutherford, and J. F. Wolfe—equal ; 4. T. W. A. Daman and A. L. Husband—equal (*Medallists*) ; 6. C. W. Eames ; 7. T. H. Stevenson ; 8. J. F. Holden ; 9. T. M. Callender ; 10. Ernest Bray, C. H. Kruger, B. L. Learmonth, and G. W. Robertson—equal.

Second-Class Honours.—14. J. G. Ross, R. Selby, and A. E. White—equal ; 17. F. R. Momplé, O. St J. Moses, D. R. Rowlands, and A. H. Watt—equal ; 21. C. B. Crampton and E. H. Jones—equal ; 23. B. W. Burwood, T. A. Coward, C. A. Dickson Lauder, D. G. M. Teague, and W. W. Wood—equal ; 28. W. Evans and D. M. Mackay—equal ; 30. J. Stenhouse ; 31. W. R. Mander ; 32. W. Thomson ; 33. H. F. L. Taylor ; 34. J. G. Anderson, A. J. W. Buchanan, R. Godfrey, and J. W. de Vos—equal ; 38. F. H. Merry ; 39. S. O. Browne ; 40. H. C. Pearson ; 41. T. S. Church, J. M. Coates, W. T. Ritchie, and A. Wallace —equal ; 45. A. Boon, James Gray, and G. A. Welsh—equal ; 48. F. B. Macdonald.

Winter Session, 1892-93.

First-Class Honours.—1. F. M. Purchas (*Medallist*) ; 2. D. W. Fletcher and A. R. Wight—equal.

Second-Class Honours.—4. W. G. Wight ; 5. J. H. Henderson ; 6. J. Boyd Jamieson and W. E. Williams—equal ; 8. A. F. Cameron, R. Hill, and T. B. Shoolbread—equal ; 11. H. N. Chambers, J. S. Fraser, F. S. Harper, and T. B. Unwin—equal.

J. C. EWART, M.D., *Professor.*

CHEMISTRY.

Robert Wilson Memorial Prize. — Wm. Hamilton, Middlesborough.

First-Class Honours.—1. William Hamilton, Middlesborough ; 2. A. Fawns Cameron, M.A., Forfarshire ; 3. George Burns, Edinburgh ; 4. Edwin Matthew, Nairn ; 5. J. B. Cusine, Dunning (*Medallists*) ; 6. T. C. Baillie, Peeblesshire ; C. M. Cooper, England ; and H. M. Traquair, Edinburgh—equal ; 9. John Muir Castle-Douglas ; and J. D. Slight, Portobello—equal ; 11. E. H. Jones, N. Wales ; and H. H. Morton, Trinidad—equal ; 13. T. A. Ross, Edinburgh ; 14. Wm. Brown, Trinidad ; and C. D. Lander, Sydney, N.S.W.—equal ; 16. E. F. Bashford, Portobello ; and G. Gatenby, Stockton-on-Tees—equal ; 18. J. J. L. Macfarlane ; 19. G. Robertson, Edinburgh ; 20. G. Brownlee, Edinburgh ;

21. R. W. Anthony, and J. Richards, Portmadoc—equal; 23. John Malcolm, Caithness; H. Sibbald, Bishop Auckland; and W. G. Wight, Windygates—equal; 26. D. L. Fisher, Belfast; and James Scott, Edinburgh—equal; 28. R. C. Cunningham, Londonderry; O. St John Moses, Calcutta; H. T. J. Thacker, New Zealand; and J. F. Wolfe, Ireland—equal.

SECOND-CLASS HONOURS. — 32. Wm. Burns, Carnoustie; C. H. Kruger, South Africa; W. M. Milne, Edinburgh; and G. S. Small, Brechin; equal; 36. T. R. W. Armour, Edinburgh; 37. J. Allison, Carstairs; 38. G. N. Dods, Edinburgh; J. Boyd Jamieson, Edinburgh; and G. H. Parry, Southampton—equal; 41. W. Adamson, Kirkcudbrightshire; T. M. Callender; and J. W. Struthers, Edinburgh—equal; 44. A. Allum, Trinidad; 45. F. T. H. Adamson, Forfar; 46. B. Burwood, London; W. R. Somerset, Derbyshire; and A. H. Watt, Edinburgh—equal; 49. C. H. Johnson, Melbourne, and R. Selby, Wigtown—equal; 51. G. C. Low, Monifieth, and G. B. Serle, East Linton—equal; 53. C. P. B. Wall, London; 54. L. F. Biccard, The Cape, and A. A. Robinson, Trinidad—equal; 56. T. Johnstone, Carlisle; W. E. M'Kechnie, and J. Wood, Haddington—equal; 59. W. Martin, Ballynahinch, and A. E. Richard—equal; 61. C. A. Brugman, The Cape; R. Gellatly, Manchester; and A. R. Wight, Windygates—equal; 64. J. H. Patterson, Tasmania, and G. C. Thomas, Bath—equal; 66. E. H. Irwin, Armagh, and T. Rogerson, Greenlaw—equal; 68. J. Donaldson, Carnwath; A. H. Kuen, Singapore; T. B. Shoolbread, and H. Y. Taylor, Edinburgh—equal; 72. J. Graham, Joppa; A. W. Limont, Alnwick; T. W. Pickles; and F. M. Purchase, New Zealand—equal; 76. E. P. Baumann, The Cape; G. Fourie, S. Africa; and H. R. Philips, London—equal.

PRACTICAL CHEMISTRY.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. H. S. Brockway (*Medallist*); 2. Wm. Evans; 3. George G. Henderson, M.A.; 4. J. E. H. Bennett and James Muir Grieve—equal; 6. C. B. Crampton and M. V. Dee—equal; 8. Alex. D. Russell, Edinburgh, and A. Corsar Sturrock, M.A.—equal; 10. D. Waterston, M.A.; 11. G. Scott Dalgleish and Thomas Johnstone, M.A. — equal; 13. J. H. Henderson; 14. Wm. M. Macdonald and A. T. White—equal.

SECOND-CLASS HONOURS.—16. Henry Walker; 17. D. D. M'Neil; 18. Laurence Ker; 19. Robert Gray; 20. Wm. A. Skinner.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. T. C. Baillie, Peeblesshire; 2. Edwin Matthew, Nairn; and T. A. Ross, Edinburgh—equal; 4. John Malcolm, Caithness; 5. William Hamilton, Middlesborough; and

H. M. Traquair, Edinburgh—equal (*Medallists*); 7. J. B. Cusine, Dunning; H. H. Morton, Trinidad; and G. Robertson, Edinburgh—equal; 10. W. Burns, Carnoustie; and H. Y. Taylor, Edinburgh—equal; 12. T. R. W. Armour, Edinburgh; W. Brown, Trinidad; J. W. Paterson, and G. S. Small, Brechin—equal; 16. A. H. Watt, Edinburgh; 17. W. Adamson, Kirkcudbrightshire; J. J. L. Macfarlane, Lasswade; F. W. More, Caithness; D. R. Rees, South Wales; and T. B. Shoolbread, Corstorphine—equal; 22. R. W. Anthony, and C. D. Lander, Sydney, N.S.W.—equal; 24. James Fraser, J. M'A. Fraser, Nova Scotia; and O. St. John Moses, Calcutta—equal; 27. L. Boyer, Lincolnshire; G. Gatenby, Stockton-on-Tees; R. Godfrey, Edinburgh; J. Inglis, and C. H. Kruger, South Africa—equal; 32. W. Finlay, France; E. H. Jones, Ruthin; and G. B. Serle, East Linton—equal; 35. J. Allison, Carstairs; G. C. Low, Monifieth; W. M. Milne, M.A., Edinburgh; J. Richards, Port-Madoc; A. L. P. Smith, A. R. Wight, Windygates; J. F. Wolfe, Ireland; and J. Wood, Haddington—equal; 43. T. Biggam, Wigtown; 44. T. M. Callender, Edinburgh; A. A. Robinson, Trinidad; and L. C. Saldanha, Portuguese India—equal; 47. B. C. R. Aldren, Malvern; A. S. Allum, Trinidad; T. R. Atkinson, Crewe; R. C. Cunningham, Londonderry; J. Boyd Jamieson, Edinburgh; T. M'Laren, Edinburgh; and R. G. Riddell, East Lothian—equal; 54. A. F. Cameron, M.A., Forfarshire; 55. A. H. Keun, Singapore; A. J. M'Clymont; W. R. Somerset, Derbyshire; H. T. J. Thacker, New Zealand; W. G. Wight, Windygates; and F. M. Willcox—equal; 61. A. E. Brookes, Llandudno; J. Donaldson, Carnwath; J. F. Falconer, Elgin; T. W. Pickles; R. Selby, Wigtownshire; J. A. Shoolbread, Corstorphine; H. Sibbald, Bishop Auckland; J. W. Struthers, Edinburgh; and G. Vincent, Trinidad—equal.

SECOND-CLASS HONOURS.—70. A. E. Richard; 71. J. Graham, Joppa; R. Lees, Ayrshire; and J. D. Slight, Portobello—equal; 74. D. L. Fisher, Belfast; W. E. M'Kechnie, Edinburgh; C. H. Phillips, Barbados; and A. C. Renwick, Gloucester—equal; 78. J. Forrest, Blackburn; 79. B. W. Burwood, London; and A. Gibson, Paisley—equal; 81. F. M. Parry, India; G. H. Parry, Southampton; and J. A. L. Wallace—equal; 84. D. Clow, Kelso; D. T. Griffiths, Neath; F. F. K. Hartnoll, Edinburgh; and F. Purchas, Auckland—equal; 88. L. F. Biccard, The Cape; J. E. Dods, Brisbane; G. Fourie, South Africa; R. Gellatly, Manchester; E. R. Grey, The Cape; E. H. Irwin, Armagh; and T. Rogerson, Greenlaw—equal; 95. A. J. T. Allan, Edinburgh; E. F. Bashford, Portobello; T. M. Coutinho, Bombay; Ll. W. Davies, C. H. Johnson, Melbourne; and A. W. Limont, Alnwick—equal; 101. W. H. Fowler and T. Johnstone, Carlisle—equal; 103. R. K. Howden, Natal; J. S. Lyle, Belfast; J. W. Matthew-son, Dunfermline; and J. G. Ross, Calcutta—equal; 107. G. C. Thomas, Bath; 108. E. P. Baumann, The Cape; W. Martin, Ballynahinch; J. H. P. Paton, Duddingston; and C. P. B. Wall, London—equal; 112. O. A. Gee, Edinburgh; and J. Prentice, Fife—equal; 114. J. H. Bam, South Africa; E. F. Coghlan, Longton; J. G. Forbes, James Haworth, Bacup; E. E. Porritt, and W. M. Wilson—equal; 120. H. N. Chambers, Calcutta; W. G. Heath, Antigua; R. Hill, M. E. Jones, Wales; W. W. Maxwell, and W. A. Young, Greenock—equal; 126. C. J. Caddick, West Bromwich; and G. J. Young—equal; 128. G. N. Dods. Edinburgh; 129. J. T. Hurst, E. Laval, Edinburgh; and A. M. Little, Dumfries—equal; 132. G. L. Chiene, Edinburgh; and J. W. M'Intosh, Edinburgh—equal; 134. J. L. Davies, South Wales; H. Taylor, Bath; and W. J. Veecock, Demerara—equal; 137. W. G. Sheriff, Chili; and J. R. Williamson, England—equal; 139. H. Belasco, British Guiana, and C. A. Brugman—equal; 141. G. H. Stewart, India.

C. M. Cooper was absent, through illness, from one examination, and obtained 89 per cent. over the other three.

ALEX. CRUM BROWN, M.D.; *Professor.*

PHYSICS.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. W. J. Stuart (*Medallist*); 2. H. Sibbald; 3. R. W. Anthony; 4. J. Y. Simpson and D. J. Tweedie—equal.

SECOND-CLASS HONOURS.—6. C. S. Pennell; 7. E. Matthew; 8. A. E. Richards; 9. C. M. Cooper and R. H. Hunter—equal; 11. D. G. Ross.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. J. Malcolm (*Medallist*); 2. R. C. Cunningham and J. W. Struthers—equal; 4. C. P. B. Wall; 5. J. Donaldson and F. O. Lasbrey—equal; 7. T. Biggam and T. R. Williamson—equal.

SECOND-CLASS HONOURS.—9. D. Clow and D. L. Fisher—equal; 11. W. G. Heath, A. J. M'Clymont, and T. Rogerson—equal; 14. H. K. Paxton; 15. J. F. Falconer, T. Haworth, T. J. T. M'Hattie, and W. M. Wilson—equal; 19. E. P. Baumann.

P. G. TAIT, M.A., *Professor.*

ANATOMY.

PRACTICAL ANATOMY.

SUMMER SESSION, 1892.

STUDENTS OF THE THIRD YEAR.

FIRST-CLASS HONOURS.—1. A. Keith Campbell, Montrose (*Medallist*); 2. W. Y. Grant, Dundee; B. C. Kelly, Newcastle; David

Rankine, Auchterderran; G. H. Rushton-Harrison, Carlisle; and F. T. Walmsley, Preston—equal; 7. A. G. P. Thomson, Oldham; 8. H. P. Elliot, Liverpool; 9. Alfred Cowper, Kirkcudbright, and F. W. Taylor, Blackburn—equal; 11. G. R. Livingstone, Edinburgh; 12. P. E. Edgar, Signapore, and W. H. Robertson, Scotland—equal; 14. G. D. Gray, Edinburgh; 15. A. L. Jones, Cardiff; 16. W. H. Bryce, Edinburgh; Robert Cross, Buckinghamshire, and F. C. F. Kerr, Jamaica—equal; 19. Morton Burnet, Edinburgh; H. D. N. Mackenzie, Somerset; W. E. Scott Moncrieff, Edinburgh; and W. de W. Wishart, Demerara—equal; 23. E. D. Williams, Wales; 24. James Affleck, Fort-William, and J. W. Keighley, Lancashire—equal; 26. Thomas Stuart, Darlington.

SECOND-CLASS HONOURS.—27. Robert Grieve, London, and J. M. Menzies, Edinburgh—equal; 29. Harry Armistead, Blackburn; 30. C. W. Rushton-Harrison, Carlisle; 31. S. J. Aarons, Sydney; 32. L. V. Lawrie, Burntisland; 33. H. L. Lowis, India.

The following gentlemen obtained marks for a first-class certificate, but were unable to attend one examination:—Arthur Heys, Rossendale; C. Gurney-Thomson, Berkshire; W. H. Mackay, Derby.

STUDENTS OF THE SECOND YEAR.

FIRST-CLASS HONOURS.—1. H. J. Cardale, Plymouth; Rhodes Haygarth, Keighley; and John Mackinnon, Skye—equal (*Medallists*); 4. Alex. Dall, Cupar-Fife; 5. Thomas Finlay, Edinburgh; 6. A. W. Easmon, West Africa; W. E. Johnstone, Cromarty; and Stuart Macdonald, Castle-Douglas—equal; 9. John Forbes, B.Sc., Muir of Ord; G. F. Lundy, Cape Colony; Noel Maudesley, Cumwhitton; H. V. Münster, Belfast; A. C. Sturrock, Linlithgow; and J. T. Shirlaw, Loanhead—equal; 15. D. M. Mackay, Hull; 16. J. K. Raymond, Natal; 17. E. de C. Prout, Sunderland; 18. W. J. C. Coulthard, Cumberland; 19. C. E. Potter, Glasgow; 20. Hugh Richardson, India.

SECOND-CLASS HONOURS.—21. A. J. Copplestone, Sidmouth; 22. John Macmillan, Edinburgh: 23. Harold Nuttall, Bradford; 24. J. F. Stewart, Belfast.

STUDENTS OF THE FIRST YEAR.

FIRST-CLASS HONOURS.—1. George Henderson, M.A., Dundee; (*Medallist*); 2. David Waterston, M.A., Dundee; 3. S. H. Carr, Carlisle.

WINTER SESSION, 1892-93.

STUDENTS OF THE THIRD YEAR.

PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. Joseph E. Bowes, Notts; Percy J. Henderson, Edinburgh; and E. G. Richards, Brechin—equal

(*Medallists*); 4. J. H. C. Derham, Preston; Thomas Finlay, Edinburgh; W. E. Johnstone, M.A., Cromarty; J. C. Rait, Leuchars; V. A. Ross, Sutherland; F. W. Taylor, Blackburn; and W. A. Stephen, Ayr—equal; 11. J. M. Beattie, New Zealand; W. W. Chipman, Nova Scotia; J. M. Dalziel, India; F. H. Fairweather, Huddersfield; William Haig, Fifeshire; T. H. Jamieson, Edinburgh; H. A. Leebody, Londonderry; Neil Macvicar, Peeblesshire; W. C. W. M'Dowell, B.A., New Zealand; and W. de W. Wishart, Demerara—equal; 21. S. H. B. Allison, Londonderry; T. M. Bartlett, Jamaica; J. A. Gibson, Edinburgh; Bruce C. Kelly, Newcastle-on-Tyne; William Mitchell, Aberdeenshire; K. W. Monsarrat, Kendal; and John Mackinnon, Skye—equal; 28. W. L. Martin, Edinburgh; J. R. Muir, Ayr; and H. V. Münster, Belfast—equal; 31. James Affleck, Fort William; R. W. Beesley, Preston; D. F. Dewar, Northumberland; John Forbes, M.A., Inverness; D. F. Laidlaw, Victoria; R. S. Mowat, East Lothian; and C. E. Potter, Glasgow; and J. M. Rutherford, Dumfries—equal; 39. O. H. Chapman, Cleothorpes; Simon Fraser, Inverness; E. R. Holmes, Shropshire; F. C. F. Kerr, Edinburgh; D. M. Lawson, M.A., Stirling; L. S. L. Liddell, Portobello; Wm. Mailer, Perth; Richard Owen, Wales; and R. G. Robson, Inverness-shire—equal; 48. Robert Cochrane, Larbert; Alex. Dall, Cupar; James Gillies, Skye; D. J. Graham, Glenboig; and R. A. Ross, 'Derry—equal; 53. C. C. Aitken, London; Wm. Bell, Liverpool; E. R. Dodds, London; H. E. Huntly, Preston; and Rodie Parkhurst, Blackheath—equal; 58. A. G. Fenn, Madrid; S. G. Ogilvy, Campbeltown; J. A. Parsons, Lincoln; and R. G. Selby, Cumberland—equal; 62. Arthur Heys, Rossendale; Kenneth Maclean, Lanark; F. S. Rose, Orkney; J. E. W. Somerville, New Zealand; and R. B. Smith, Lancashire—equal; 67. J. H. Bruce, St Andrews; S. S. Messulam, Constantinople; T. W. Rhoades, Warwickshire; C. Richardson-White, Edinburgh; and C. W. Rushton-Harrison, Carlisle—equal; 72. Lauchlan Rose, M.A., Blair Athole; and Thomas Smith, York—equal; 74. W. D. Adams, Edinburgh; L. A. Drake, Suffolk; S. J. Gilfillan, Stirling; and James Watson, Mid-Calder—equal; 78. S. J. Aarons, Sydney; John Anderson, Dornoch; B. R. Craig-Christie, Lanarkshire; and E. de C. Prout, Somersetshire—equal; 82. G. C. Elliot, Nantwich; W. A. Gibb, Scotland; A. G. Naylor, Gloucester; W. MacRae Taylor, Edinburgh; and Robert Robertson, Shetland—equal; 87. Nathaniel Caine, Liverpool; L. A. Crooks, Jamaica; Robert Grieve, London; Archibald Mitchell, Scotland; and Richard Roycroft, County Cork—equal; 92. Stanley Ducat, Arbroath, and J. B. Hay, Cape Colony—equal; 94. W. L. Lyall, Leven, and Fred. Porter, Jedburgh—equal.

SECOND-CLASS HONOURS.—96. Henry Waters, Edinburgh; 97. H. G. Campbell, Dundee; 98. N. T. Kerr, Ardrishaig; 99. Richard

Brodie, Inverness; 100. B. M. Bone, Lancaster, and P. F. Chapman, London—equal; 102. J. A. Macfarlane, Trinidad; 103. F. W. Allkin, Manchester; 104. Wm. Evans, Bolton; 105. A. B. Blair, Edinburgh.

Mr A. M. Rattray, Portobello, who was absent from one of the five examinations, also obtained marks.

Students of the Second Year.

LECTURES ON ANATOMY.

First-Class Honours.—1. J. H. Henderson, New Zealand; 2. O. St John Moses, Calcutta (*Medallists*); 3. J. T. Hewetson, Cumberland.

Second-Class Honours.—4. James Watt, New Zealand; 5. F. W. Twidale, India.

Students of the Second Year.

PRACTICAL ANATOMY.

Examinations conducted on their own dissections.

First-Class Honours.—1. J. T. Hewetson, Cumberland, and G. F. White, Nairnshire—equal (*Medallists*); 3. D. R. Rowlands, Wales; 4. H. J. Cardale, Devonport; 5. Edwin Bramwell, Edinburgh; 6. A. G. Naylor, Gloucester; 7. B. L. Livingstone-Learmonth, Australia; 8. J. L. Marjoribanks, East Lothian; Andrew Wallace, Prestonpans; and Addie White, Scotland—equal; 11. James Bannerman, Southport, and A. P. Low, Arbroath—equal; 13. T. H. Macfie, Whitehorn; 14. J. H. Henderson, New Zealand; O. St John Moses, Calcutta; and David Rodger, Johnshaven—equal; 17. Walter Johnson, Preston, and James Watt, New Zealand—equal; 19. Arthur Dickson, Montrose; William Mowat, Haddington; and Robert Thornton, Arbroath—equal; 22. John Eason, Leith; 23. John Bruce, Perthshire; 24. James Kirk, Edinburgh, and John Macdonald, Argyleshire—equal; 26. A. W. Bowie, Edinburgh, and T. D. Sadler, Edinburgh—equal; 28. W. G. C. Geekie, Perthshire, and J. F. Holden, Preston—equal; 30. A. M. Fleming, Partick, and H. Carden Pearson, Tamworth—equal; 32. A. E. White, Bradford; 33. C. Redwood-White, Jamaica.

Students of the First Year.

LECTURES ON ANATOMY.

First-Class Honours.—1. William F. Harvey, India; William Finlay, France; Edwin Matthew, M.A., Nairn; and C. M. Cooper, Somersetshire (*Medallists*); 5. E. F. Bashford, Portobello; G. C. Low, Monifieth; and A. E. Richard, Lausanne—equal; 8. J. B. Cusine, Dunning; C. D. Lander, Bangalore; and A. D. Yule, Arbroath—equal; 11. William Hamilton, Middlesborough; and W. M. Milne, Edinburgh—equal; 13. James Drever, Orkney; T. A. Ross, Edinburgh; and J. D. Slight, Portobello—equal; 16. H. S. Brockway, Madagascar; George Henderson, Dundee; E. H. Irwin, Armagh; G. B. Serle, East Linton; David Waterston, Edinburgh; and J. F. Wolfe, County Cork—equal; 22. G. P. Henderson, Redcar; and G. Crewdson Thomas, Bath—equal; 24. W. G. Heath, Antigua; and John Malcolm, Halkirk—equal; 26. D. D. Gold, Fifeshire; John Hirst, Bradford; E. H. Jones, Rhyl; W. J. Penfold, Brampton; and James Wood, Edinburgh—equal; 31. B. C. R. Aldren, Malvern, T. R. W. Armour, Edinburgh; T. J. T. M'Hattie, Antigua; F. M. Parry, India; and A. H. Watt, Edinburgh—equal.

SECOND-CLASS HONOURS.—36. Andrew Gibson, Paisley, and H. Y. Taylor, Edinburgh—equal; 38. T. M. Callender, Edinburgh; George Gatenby, Stockton-on-Tees; R. G. Riddell, Peeblesshire; and Robert Selby, Wigtownshire—equal; 42. G. S. Small, Brechin; 43. C. H. Philips, Barbados, and W. R. Somerset, Derbyshire—equal; 45. W. J. Veecock, British Guiana, and J. T. Williams, Wales—equal; 47. G. L. Chiene, Edinburgh; J. F. Falconer, Elgin; and F. W. More, Wick—equal; 50. C. P. B. Wall, London; 51. C. J. Caddick, Staffordshire, and F. A. Georgeson, Wick—equal; 53. A. B. M'Carthy, Dorset, and James Prentice, M.A., Fifeshire—equal; 55. William Burns, Forfarshire; David Clow, Kelso; A. M. Little, Annan; and G. A. Sander, Dorset—equal; 59. Thomas Biggam, Wigtown; S. H. Carr, Carlisle, and J. W. M'Intosh, Edinburgh—equal; 62. J. S. Martin, Portlaw, and G. Hearn Parry, Southampton—equal; 64. H. R. Phillips, London, and W. A. Skinner, Lauder—equal; 66. B. W. Burwood, London, and R. C. Cunningham, Londonderry—equal; 68. Leonard Boyer, Sleaford, and E. E. Porritt, New Zealand—equal; 70. W. S. Eaton, Cleator Moor; C. H. Elmes, Gibralter; and J. Rowan Robinson, County Leitrim—equal; 73. W. E. M'Kechnie, South Africa; J. R. Williamson, Surrey; E. F. Wills, Madagascar; and W. M. Wilson, Bebside—equal; 77. J. W. Ingles, Crieff, and G. H. Stewart, India—equal; 79. H. Belasco, British Guiana, and G. L. Findlay, Natal—equal; 81. Henry Taylor, Bath; 82. A. T. White, Jedburgh.

The following gentlemen were present at *two examinations* and obtained marks:—H. M. Traquair, Edinburgh; J. M'A. Fraser, Nova Scotia; J. A. Murray, Mid-Lothian; John Muir, Castle-Douglas; R. K. Howden, Natal; A. J. Orchard, Victoria; C. H. Kruger, Cape Colony; W. Ll. Pritchard, Redford; C. A. Brugman, Cape Colony; R. W. Knox, India; F. M. Willcox, South Australia; E. F. Coghlan, Staffordshire; J. H. Walters, South Wales; A. G. Carment, Edinburgh.

STUDENTS OF THE FIRST YEAR.

PRACTICAL ANATOMY.

Examinations conducted on their own dissections.

FIRST-CLASS HONOURS.—1. H. M. Traquair, Edinburgh; 2. W. W.

Wood, Leith; 3. J. A. Murray, Mid-Lothian; Alf. E. Richard, Lausanne; and C. D. Lander, Bangalore—equal (*Medallists*); 6. T. M. Callender, Edinburgh, and J. D. Slight, Portobello—equal; 8. E. F. Bashford, Portobello; C. M. Cooper, Somersetshire; J. M'A. Fraser, Nova Scotia; D. D. Gold, Fifeshire; W. M. Milne, M.A., Edinburgh; G. S. Small, Brechin; David Waterston, Edinburgh; and J. F. Wolfe, County Cork—equal; 16. F. W. More, Wick; 17. G. L. Chiene, Edinburgh; Edwin Matthew, Aberdeen; G. Hearn Parry, Southampton; Robert Selby, Wigtownshire; and Henry Y. Taylor, Edinburgh—equal; 22. G. B. Serle, East Linton, and F. M. Willcox, South Australia—equal; 24. J. G. Ross, Calcutta; James Wood, Edinburgh; and A. D. Yule, Arbroath—equal; 27. G. C. Low, Monifieth; J. Malcolm, Halkirk; James Prentice, M.A., Fifeshire; G. Sander, Dorset; and G. Crewdson Thomas, Bath—equal; 32. R. W. Knox, India; J. S. Martin, Portlaw; T. J. T. M'Hattie, Antigua; T. A. Ross, Edinburgh; F. O. de Souza, Straits Settlements; and C. P. B. Wall, London—equal; 38. E. F. Coghlan, Staffordshire; G. Ll. Roberts, Penarth; and W. A. Skinner, Lauder—equal; 41. G. L. Findlay, Natal; A. F. Fraser, Inverness; W. G. Heath, Antigua; R. K. Howden, Natal; and R. G. Riddell, Peeblesshire—equal; 46. Thomas Biggam, Wigtown, and J. W. Edwards, Oswestry—equal; 48. G. H. Stewart, India; 49. J. B. Cusine, Dunning; C. H. Elmes, Gibraltar; and J. W. Macintosh, Edinburgh—equal.

SECOND-CLASS HONOURS.—52. E. H. Irwin, Armagh; 53. John Macmillan, Edinburgh; F. M. Parry, India; and J. R. Williamson, Surrey—equal; 56. J. G. Bailey, Worcester, and H. M'D. Cameron, Nova Scotia—equal; 58. J. G. Forbes, Edinburgh; 59. D. H. Hutchinson, London; 60. Leonard Boyer, Sleaford; R. C. Cunningham, Londonderry; W. S. Eaton, Cleator Moor; W. W. Maxwell, Newcastle; and W. J. Veecock, British Guiana—equal; 65. H. Belasco, British Guiana; B. W. Burwood, London; and James Haworth, Bacup—equal; 68. J. H. Paterson, Ceylon; 69. J. F. Falconer, Elgin; 70. J. Rowan Robinson, County Leitrim; 71. T. F. Blake, Bournemouth.

THE SENIOR MACKENZIE BURSARY has been gained by J. M. Beattie, New Zealand, and H. V. Münster, Belfast—equal.

THE JUNIOR MACKENZIE BURSARY has been gained by E. F. Bashford, Portobello, and J. A. Murray, Mid-Lothian—equal.

Proxime Accesserunt.—B. W. Burwood, London, and D. H. Hutchison, London—equal.

SPECIAL CERTIFICATES OF PROFICIENCY FOR THEIR DISSECTIONS are awarded to H. M. Traquair, Edinburgh; F. M. Parry, India; T. M. Callender, Edinburgh; C. D. Lander, Bangalore; W. S. Eaton, Cleator Moor; G. H. Stewart, India; H. Dewar, Lanarkshire; G. L. Findlay, Natal; R. K. Howden, Natal; William Maxwell, Newcastle; R. G. Riddell, Peeblesshire.

THE SENIOR "JOHN AITKEN CARLYLE" BURSARY in Anatomy and Physiology was gained by J. H. Henderson, New Zealand. *Proxime Accessit.*—J. T. Hewetson, Cumberland.

THE JUNIOR "JOHN AITKEN CARLYLE" BURSARY in Anatomy and Chemistry was gained by William Hamilton, Middlesborough. *Proxime Accessit.*—Edwin Matthew, Aberdeen.

The following gentlemen acted as Prosectors to the Class:—Neil Macvicar, Peeblesshire; W. MacRae Taylor, Edinburgh; A. A. M'Leod, Stornoway; J. T. Hewetson, Cumberland; G. F. Whyte, Nairnshire; David Fairweather, Edinburgh.

W. TURNER, Kt., LL.D., *Professor.*

INSTITUTES OF MEDICINE.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. W. de W. Wishart, Demerara; 2. H. V. Münster, Belfast—*Medallists*; 3. J. M. Beattie, New Zealand, and E. T. F. Birrell, Scotland—equal; 5. J. M. Dalziel, India, and R. Samut, Malta—equal; 7. G. Shaw, Scotland.

SECOND-CLASS HONOURS.—8. A. Edwards, Motherwell, and J. A. Parsons, Lincoln—equal; 10. T. H. Jamieson, Edinburgh; 11. E. G. Richards, Brechin; 12. E. D. W. Greig, Edinburgh; 13. A. Heys, Rossendale; 14. W. Mitchell, Aberdeenshire; 15. A. R. Wilson, Edinburgh; 16. P. D. Smith, Tasmania; 17. P. M Ragg, Wellington; 18. A. Dall, Cupar-Fife; 19. J. R. Watson, Falkirk; D. J. Graham, Glenboig; T. H. Jones, Chester; and J. B. Wood, Edinburgh—equal; 23. A. Whytt, Edinburgh; 24. A. J. Gibson, Stornoway, and F. G. Proudfoot, St Andrews—equal; 26. R. Cochrane, Stirlingshire; 27. C. E. Potter, Glasgow, and J. M. Rutherford, Argyllshire—equal; 29. A. J. Campbell, M.A., Selkirk; S. H. Hall, Carlisle; and R. W. Monsarrat, Westmoreland—equal; 32. E. R. Holmes, Shropshire, and L. A. Crooks, Jamaica—equal.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. D. Brough, Musselburgh; 2. L. Grant, Strathspey; 3. A. P. Low, Arbroath, and J. A. Milroy, Kirkcowan—equal; 5. A. D. Yule, Arbroath—(*Medallists*); 6. J. H. Frazer, Edinburgh, and A. C. Sturrock, M.A., Linlithgow—equal; 8. G. J. Blackmore, New Zealand; H. C. Colman, Peterborough; A. W. Easmon, Freetown; J. T. Hewetson, Cumberland; G. J. Jenkins, Victoria; and A. D. Peill, Madagascar—equal; 14. W. J. Coulthard, Whitehaven; 15. H. S. Brockway, Madagascar; 16. R. Haygarth, Keighley; 17. A. L. Husband, Mansfield, and C. Maclaurin, Sydney, N.S.W.—equal.

Second-Class Honours.—19. J. H. Henderson, New Zealand; 20. J. Forbes, B.Sc., Muir of Ord; W. H. C. Forster, Northumberland; T. H. Macfie, Whithorn; W. M. Macdonald, New Zealand; and D. Waterston, Glasgow—equal; 25. F. Gardiner, Edinburgh, and H. F. L. Taylor, Dollar—equal; 27. J. Allison, Lanarkshire; W. H. Borrie, New Zealand; J. Kirk, Edinburgh; and A. E. Kidd, Dundee—equal; 31. C. M. Hector, New Zealand; 32. D. F. Dewar, Northumberland; G. P. Henderson, Redcar; J. W. Keighley, Blackburn; and F. R. Jones, Leicester—equal; 36. J. A. Forrest, Antigua; 37. J. Bannerman, Southport; F. B. Macdonald, Keith; G. F. Whyte, Nairnshire; and A. Wallace, Prestonpans—equal; 41. R. M. Hall, Sunderland; B. L. L. Learmonth, Australia; D. M. Mackay, Hull; and J. Stenhouse, Edinburgh—equal; 45. D. D. Gold, Fifeshire; 46. C. W. Eames, Leeds; S. M'Donald, Castle-Douglas; and J. Watt, New Zealand—equal; 49. R. M. Leith, Cape Colony; and H. M. Morton, Longtown—equal; 51. W. Johnson, England; 52. A. W. Fletcher, Melbourne, and P. W. Shepherd, Yorkshire—equal; 54. W. R. Mandor, Woolwich, and M. Williams, Wales—equal; 56. W. E. Gibbons, Liverpool; A. Macdonald, Edinburgh; and W. J. Penfold, Brampton—equal; 59. G. H. Masson, Trinidad; 60. J. E. H. Bennett, Cork, and G. F. Lundie, Cape Colony—equal; 62. J. B. Blaikie, Scotland; 63. J. W. Anderson, New Zealand; 64. W. B. Anderson, Dundee; H. Halton, Carlisle; P. C. Luttig, Cape Colony; J. Stoddart, Berwick; and F. W. Twidale, India—equal; 69. J. Davidson, Berwick; S. Carmichael, Edinburgh; and F. S. C. Thompson, Brisbane—equal.

PRACTICAL PHYSIOLOGY.

Summer Session, 1892.

First-Class Honours.—1. J. H. Frazer, Edinburgh, and Colin M'Vicar, M.A., Greenock—equal; 3. W. A. Stephen, Scotland (*Medallists*); 4. J. M. Beattie, New Zealand; 5. D. Brough, Musselburgh, and Neil Macvicar, Peeblesshire—equal: 7. R. Haygarth, Keighley, and G. Shaw, Edinburgh—equal.

Second-Class Honours.—9. J. L. Leadbetter, Edinburgh; 10. S. H. B. Allison, Londonderry: 11. T. M. Bartlett, Jamaica; 12. G. F. Lundie, Cape Colony; 13. J. T. Hewetson, Cumberland; 14. L. Grant, Strathspey; 15. H. R. Brown, Argyllshire, and S. J. Gilfillan, Stirling—equal; 17. A. W. Easmon, West Africa, and A. C. Sturrock, Linlithgow—equal; 19. A. Bremner, Banffshire, and J. K. Raymond, Natal—equal; 21. J. Bannerman, Southport; F. R. Jones, Leicester; H. F. Menzies, London (Ontario); E. G. Richards, Brechin; and L. A. Williams, Chester—equal; 26. W. C. Rowlands, Brecon; 27. R. T. Bruce, Edinburgh, and G. J. Jenkins, Victoria—equal; 29. M. Hughes, Anglesey; 30. N. Maudsley, Appleby, and R. A. Ross, Ireland —equal; 32. R. Cochrane, Larbert; J. K. Jamieson, Shetland; D. Landsborough, Kilmarnock; and H. V. Münster, Belfast—equal; 36. W. J. A. Erskine, Edinburgh; D. J. Jones, Anglesey; and R. L. Roe, Galway—equal; 39. C. C. Aitken, Kennoway; M. Dee, Dungarvon; and A. T. Sampson, Bedford—equal; 42. R. Grieve, London.

DEMONSTRATORS.—E. W. Carlier, M.D., B.Sc.; A. J. Whiting, M.B.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. W. Lillie, Edinburgh—*Medallist*; 2. W. H. Thomson, India; 3. F. R. Momplé, Mauritius; 4. T. C. Gray, Caithness, and T. Gibson, Clackmannan—equal.

SECOND-CLASS HONOURS.—6. J. M. Dawson, Kinghorn, and C. M. Hector, New Zealand—equal; 8. B. L. L. Learmonth, Australia; 9. G. H. Masson, Trinidad, and L. A. Crooks, Jamaica—equal; 11. H. F. L. Taylor, Dollar; 12. A. L. Husband, Mansfield; 13. A. Dickson, Montrose; 14. F. S. C. Thomson, Brisbane; 15. W. A. Gemmell, Demerara; 16. J. Stoddart, Berwick.

WILLIAM RUTHERFORD, M.D., *Professor.*

MATERIA MEDICA.

FIRST-CLASS HONOURS.—1. Joseph E. Bowes, Notts; 2. Ronald M. Clark, Perthshire; 3. T. Hill Jamieson, Edinburgh; 4. George Shaw, Scotland; 5. Walter E. Johnstone, M.A., Cromarty; 6. J. M. Dalziel, India (*Medallists*); 7. William A. Stephen, Scotland; 8. T. H. C. Derham, Preston; 9. Simon Frazer, Inverness; 10. James M. Beattie, M.A., New Zealand; 11. Wm. H. Borrie, New Zealand, and Colin M'Vicar, Greenock—equal.

SECOND-CLASS HONOURS.—13. R. Cochrane, Larbert; 14. W. W. Chipman, Nova Scotia; 15. R. S. Mowat, Haddington; 16. T. M. Bartlett, Jamaica; 17. Robert W. Beesley, England; 18. James A. Gibson, Edinburgh; 19. Bruce C. Kelly, Newcastle; 20. Alexander Whytt, Scotland; 21. Thos. Smith, Yorkshire, and J. Gillies, Skye—equal; 23. Andrew J. Gibson, Stornoway; Neil Macvicar, Perthshire; and H. V. Munster, Ireland—equal; 26. Thos. Finlay, Scotland; 27. J. Kay Jamieson, Scotland; 28. John Forbes, B.Sc., Muir of Ord; 29. S. H. Browne Allison, Ireland, and James R. Watson, M.A., Falkirk—equal; 31. C. F. Lassale, Trinidad; 32. Wm. Mitchell, Aberdeen; 33. Fred. Porter, Scotland; 34. Arthur Heys, Rossendale; 35. James C. Rait, Scotland; 36. E. de Carle Prout, Bridgwater; 37. G. N. Alexis, Grenada; 38. John Forbes, Inverness; 39. W. Y. Grant, Scotland; 40. R. A. Ross, Cootehill; 41. Osmund H. Chapman, England; 42, Victor A. Ross. Sutherland; 43. John Mackinnon, Skye; 44. P. T. Hughes, England, and S. Messulam, Constantinople; 46. W.

H. Price, India; 47. John R. Muir, Ayr; 48. E. R. Holmes. Shropshire, and A. E. Kidd, Dundee—equal; 50. C. W. Eames, Driffield, and Wm. Mailer, Perth—equal; 52. P. D. Smith, Tasmania; 53. Kenneth MacLean, Scotland; 54. O. St John Moses, Calcutta, and Richard Roycroft, Ireland—equal; 56. William Haig, Fife; 57. C. Crawford Aitken, Scotland, and J. M. Rutherford, Scotland—equal; 59. D. M. R. Crichton, Scotland; 60. R. G. Selby, England; 61. Michael Hughes, Wales; 62. W. F. Eason, Lanarkshire; 63. F. W. Taylor, Lancashire; 64. Charles E. Potter, Glasgow, and W. de W. Wishart, Demerara—equal; 66. P. M, Ragg, Wellington, Salop; 67. Thomas E. Watson, Ireland; 68. A. J. Campbell, M.A., Selkirk, and F. H. Fairweather, Huddersfield—equal; 70. David Landsborough, Scotland; 71. C. Chandu Lall, India; 72. D. F. Laidlaw, Victoria, and G. D. de Waal, Cape Colony—equal; 74. F. G. Proudfoot, Scotland; 75. J. A. Macfarlane, Trinidad; 76. E. A. W. English, Bath; 77. J. W. Anderson, New Zealand, and W. Leslie Lyall, Leven—equal; 79. H. A. Leebody, Ireland; 80. A. N. Fleming, Campbeltown; 81. T. H. Jones, Chester, and C. W. Owen, Anglesea—equal.

PRACTICAL MATERIA MEDICA.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. Edward Crarer, Blairgowrie; 2. T. H. Jamieson, Edinburgh; 3. John M. Dalziel, India (*Medallists*); 4. William F. Harvey, S. India; 5. Walter E. Johnstone, M.A., Cromarty; 6. Fred Porter, Scotland; 7. W. de W. Wishart, British Guiana.

SECOND-CLASS HONOURS.—8. James M. Beattie, New Zealand; 9. John Forbes, B.Sc., Muir of Ord; 10. Colin M'Vicar, M.A., Greenock; 11. R. S. Mouat, E. Lothian; 12. William D. Adams, Edinburgh, and Thomas M. Bartlett, Jamaica—equal; 14. C. Crawford Aitken, Scotland; 15. D. F. Dewar, Northumberland; 16. D. T. R. Jones. Rhymney, and J. T. Shirlaw, Loanhead—equal; 18. R. Adolphus Ross, Ireland; 19. S. H. B. Allison, Londonderry; John A. Laing, New Zealand; H. A. Leebody, Londonderry; and Lewis A. Williams, Chester—equal.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. James A. Gibson, Edinburgh.

SECOND-CLASS HONOURS.—2. J. Witherspoon, Chester; 3. W. Leslie Lyall, Leven.

THOMAS R. FRASER, M.D., *Professor.*

GENERAL PATHOLOGY.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. W. L. Martin, Edinburgh.

SECOND-CLASS HONOURS.—2. W. Y. Grant, Scotland; 3. D. C. Gray, Thurso; 4. James M. Rutherford, Dumfries; 5. J. A. Hunter, Belfast.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. A. Keith Campbell, Montrose; 2. James M. Beattie, M.A., New Zealand; 3. Colin M'Vicar, Greenock; 4. Henry R. Brown, M.A., Pau, France (*Medallists*); 5. James C. Rait, Leuchars; 6. David Lawson, Stirling; 7. T. M. Bartlett, Jamaica; Thomas Finlay, Edinburgh; and James A. Gibson, Edinburgh—equal; 10. E. T. F. Birrell, Penicuik; T. H. C. Derham, Preston; Walter E. Johnstone, Cromarty; and Kenneth MacLean, Scotland—equal.

SECOND-CLASS HONOURS.—14. S. H. B. Allison, Londonderry; R. W. Beesley, Preston; J. M. Dalziel, India; and S. Fraser, Inverness—equal; 18. D. M. R. Crichton, Scotland; T. Hill Jamieson, Scotland; and C. F. Lassalle, Trinidad—equal; 21. John Eason, Leith; 22. George J. Jenkins, Victoria, and James A. Parsons, Lincoln—equal; 24. Robert Cochrane, Larbert; F. H. Fairweather, Huddersfield; and R. S. Mowat, Haddington—equal; 27. John R. Muir, Ayr; Harold V. Münster, Belfast; and Victor A. Ross, Sutherland—equal; 30. Ronald T. Herdman, Scotland, and Neil M'Vicar, Peeblesshire—equal; 32. W. H. Borrie, New Zealand; 33. J. R. Watson, M.A., Falkirk; 34. Frederick W. Taylor, Lancashire; 35. James Gillies, Isle of Skye; E. R. Holmes, Shropshire; and A. E. Kidd, Dundee—equal; 38. A. J. Campbell, M.A., Duns, and K. W. Monsarrat, Westmoreland—equal; 40. Andrew J. Gibson, Stornoway, and John Mackinnon, Skye—equal; 42. H. A. Leebody, Ireland; W. Leslie Lyall, Scotland; John Macmaster, Sydney; and Thomas Smith, Yorks—equal; 46. C. W. Eames, Leeds; Sydney S. Messulam, Constantinople; and W. de. W. Wishart, British Guiana—equal; 49. William Mailer, Perth, and Robert G. Selby, England—equal; 51. F. C. F. Kerr, Jamaica, and P. Douglas Smith, Tasmania—equal; 53. Osmund H. Chapman, Cleethorpes, and Robert Grieve, London—equal; 55. C. Crawford Aitken, Scotland; 56. William B. Anderson, Dundee, and J. Kay, Jamieson, Shetland—equal; 58. J. G. Masson, Scotland.

Mr William Leslie, Scotland, was absent from the last examination through illness. He obtained Second-Class Honours in the first two.

PRACTICAL PATHOLOGY.

Summer Session, 1892.

SENIOR DIVISION.

First-Class Honours.—W. D. Adams, Edinburgh.

JUNIOR DIVISION.

First-Class Honours.—1. Colin M'Vicar, M.A., Greenock; 2. Percy J. Henderson, Edinburgh; Walter E. Johnstone, Cromarty; and David Rankine, Auchterderran—equal (*Medallists*); 5. James M. Beattie, New Zealand, and Wilfred Glegg, Edinburgh—equal; 7. Arthur Heys, Rossendale; 8. S. Fraser, Inverness; 9. W. A. Stephen, Scotland; 10. George Lawrence, Dundee; 11. T. H. Jamieson, Edinburgh, and V. A. Ross, Sutherland—equal; 13. R. S. Mowat, East Lothian, and Robert Samut, Malta—equal; 15. F. Kerr, Jamaica, and John Mackinnon, Skye—equal; 17. J. M. Dalziel, India, and T. H. C. Derham, England—equal.

Second-Class Honours.—19. E. R. Holmes, Shropshire, and W. H. Hunter, Edinburgh—equal; 21. C. C. Aitken, Kennoway; W. B. Anderson, Dundee, and Neil M'Vicar, Peebleshire—equal; 24. D. M. Hutton, Liverpool, and W. Leslie, Glasgow—equal; 26. T. M. Bartlett, Jamaica; 27. J. B. Hay, Cape Colony; 28. G. N. Alexis, Grenada; P. M. Ragg, Wellington, Salop, and Jas. M'K. Wishart, Largs—equal; 31. Jas. Affleck, Fort-William, and E. T. F. Birrell, Penicuik—equal; 33. W. de W. Wishart, British Guiana; 34. James Gillies, Skye; 35. Andrew J. Gibson, Stornoway; 36. F. H. Fairweather, Huddersfield; 37. O. H. Chapman, Cleethorpes, and E. K. Scott, Queensland—equal; 39. R. W. Beesley, Preston; H. A. Leebody, Londonderry; H. V. Münster, Belfast, and Thomas Pretsell, Lanarkshire—equal; 43. T. C. Penfold, Cumberland; 44. C. G. Giddy, York; 45. R. T. Bruce, Edinburgh; 46. T. A. Glover, Kirkcudbrightshire; R. A. Ross, Ireland, and L. A. Williams, Chester—equal.

J. A. Parsons, Lincoln, obtained 78·0 per cent. in the first two examinations.

Winter Session, 1892-93.

SENIOR DIVISION.

First-Class Honours.—D. C. Gray, Thurso.

JUNIOR DIVISION.

First-Class Honours.—1. G. Sandeman, England; 2. C. W. Eames, Duffield.

Second-Class Honours.—3. J. Kay Jamieson, Shetland; 4. A. W. Fletcher, Melbourne; 5. W. Stokes, South India; 6. W.

Evans, England; 7. R. Irvine, Londonderry; 8. D. A. Cameron, Stockton-on-Tees.

W. S. GREENFIELD, M.D., *Professor.*

SYSTEMATIC SURGERY.

SENIORS.

FIRST-CLASS HONOURS.—1. W. B. Bell, Falkirk; 2. W. M'D. Selby, Wigtownshire; 3. George P. Coldstream, India—*Medallists;* 4. W. A. Rutherford, Yorkshire; 5. R. W. Duncan, Cornwall; A. P. Steavenson, Darlington; and D. W. Sutherland, Melbourne—equal; 8. C. Crerar, Cumberland; J. G. M'Naughton, Bathgate; T. Goldie-Scott, Kirkcudbright; and W. B. Turnbull, Aberdeen—equal; 12. A. M. Easterbrook, England; Charles Kerr, Dundee; A. Mackintosh, Inverness; R. H. Makgill; New Zealand; T. Pettey, Bournemouth; A. A. Scot-Skirving, East Lothian; C. P. Steuart, Perth; and D. A. Welsh, M.A., Forfarshire—equal.

SECOND-CLASS HONOURS.—20. James G. Cattanach, Scotland, and M. B. Steuart, Edinburgh—equal; 22. R. St G. S. Bond, Wiltshire, and G. V. A. Robertson, Yorkshire—equal; 24. D. Reid Crow, Argyllshire; Oswald H. Isard, Kent; and Andrew M'Neil, Australia—equal; 27. T. A. Clinch, London; F. T. Gourlay, Forfarshire; and Richard A. Wilson, Cape Colony—equal; 30. W. F. M'Allister Hewlings, Leicester, and Thomas Smith, Douglas—equal; 32. W. H. Bryce, Edinburgh, and M. Burrow Ray, Yorkshire—equal; 34. W. Thompson Hall, Northumberland, and J. E. Rogers, New Zealand—equal; 36. D. Monteith Ferguson, Edinburgh, and F. W. Langton, B.A., Australia—equal; 38. Duncan G. Newton, India, and R. W. Innes Smith, Edinburgh—equal; 40. D. A. Chatterjee, Calcutta, and Hugh Ross, Ross-shire—equal; 42. G. B. Anderson, Dumfriesshire, and Ernest A. Dent, Wolverhampton—equal; 44. G. E. Gabites, New Zealand, and G. Percy Humphery, England — equal; 46. Andrew Philip; 47. P. G. Edgar, London; 48. Donald M'Donald, Fort William, and W. H. Robertson, Scotland—equal.

JUNIORS.

FIRST-CLASS HONOURS.—1. Daniel Brough, Musselburgh; 2. A. Cossar Sturrock, M.A., Linlithgow; 3. Rhodes Haygarth, Yorkshire; 4. A. W. Easmon, West Africa—(*Medallists*); 5. H. Cardale, Devonport, and David Roger, Johnshaven—equal; 7. A. Lewis Husband, Mansfield, and Robert M. Leith, Cape Colony—equal; 9. Arthur D. Peill, Madagascar, and J. H. Henderson, New Zealand—equal; 11. A. P. Low, Arbroath; James Stenhouse, Edinburgh; and Andrew Wallace, Prestonpans—equal; 14. Duncan M. Mackay, Hull, and Angus Macdonald, M.A., Edinburgh — equal; 16. John A. Milroy, Wigtownshire; D. Findlay, Dundee; P. C. Lüttig, Cape Colony; and David Waterston, Edinburgh—equal; 20. G. J. Blackmore; New Zealand; W. J. C. Coulthard, Cumberland; and James Watt, New Zealand —equal.

SECOND-CLASS HONOURS.—23. Lewis Grant, M.A., Carr Bridge; William M. Macdonald, New Zealand; A. D. Macpherson, M.A., Edinburgh; and David R. Rowlands, North Wales—equal; 27. James Allison, Carluke; William H. Carse, Kirkcudbrightshire; Arthur Dickson, Montrose; and G. F. Lundie, Cape Colony—equal; 31. J. E. H. Bennett, Co. Cork; F. Gardiner, Edinburgh; B. L. Livingstone-Learmonth, Polmont; and W. R. Mander, Oxfordshire—equal; 35. James Bannerman, Southport, and Scott Carmichael, Edinburgh—equal; 37. Wilfred E. Gibbons, Liverpool; George Henderson, Edinburgh; and W. S. Malcolm, Liff—equal; 40. D. F. Dewar, Northumberland; 41. William Bethune, Lochgelly, and Cecil J. Gorringe, Tasmania—equal; 43. Horace Crakanthorp Colman, Peterborough; Thomas Grainger, Yorkshire; and F. Bedingfeld Macdonald, Keith—equal; 46. Stewart M'Donald, Castle Douglas; 47. Thomas W. Ness, Edinburgh; 48. William Hunter Robb, Glencaple, and H. M. Morton, Cumberland—equal; 50. Robert B. Purves, Scotland, and Arthur T. Sampson, Bedford—equal; 52. Hugh Richardson, India; 53. A. M. Fleming, Partick, and G. E. Stewart, Canada—equal; 55. Robert Thornton, Arbroath; John Ballantyne, Kirkcudbrightshire; J. Kirk, Shandon; Alexander Steven, Edinburgh; and F. W. Twidale, India—equal; 60. J. Macdonald, Argyllshire; 61. John Macmillan, Edinburgh, and J. Stoddart, Berwick-on-Tweed —equal; 63. James L. Marjoribanks, East Lothian; Mathias Williams, South Wales; and W. H. Steele, Torquay—equal; 66. William G. C. Geekie, Perthshire, and H. Carden Pearson, Tamworth—equal; 68. Lawrence Ker, Leicester; 69. S. H. Carr, Carlisle; H. H. Rutherford, Bathurst, N.S.W.; and T. Trevor Williams, North Wales—equal.

Honours are given in both Divisions of the Class of Systematic Surgery on the combined results of the Written and Practical Examinations.

PRACTICAL SURGERY.

SENIORS.

MEDALLIST.—A. P. Steavenson, Darlington.

PROXIME ACCESSIT.—W. M'D. Selby, Wigtownshire.

HONOURS.—W. B. Bell, Falkirk; George P. Coldstream, India; C. Crerar, Cumberland; R. W. Duncan, Cornwall; T. Goldie-Scott, India; A. A. Scot Skirving, East Lothian; M. B. Steuart, Edinburgh; W. B. Turnbull, Aberdeen; D. A. Welsh, M.A., Forfarshire; R. St G. S. Bond, Wiltshire; D. Reid Crow, Argyllshire; F. T. Gourlay, Forfarshire; T. Pettey, Bournemouth; D. W. Sutherland, Melbourne.

DAVID WALLACE, M.B., *Demonstrator.*

JUNIORS.

MEDALLIST.—A. Lewis Husband, Mansfield.

PROXIME ACCESSIT.—A. Corsar Sturrock, M.A., Linlithgow.

HONOURS.—J. E. H. Bennett, County Cork; Daniel Brough, Musselburgh; H. Cardale, Devonport; Arthur Dickson, Montrose; F. Gardiner, Edinburgh; Wilfred E. Gibbons, Liverpool; Rhodes Haygarth, Yorkshire; B. L. Livingstone-Learmonth, Polmont; A. P. Low, Arbroath; G. F. Lundie, Cape Colony: D. M. Mackay, Hull, A. D. Macpherson, M.A., Edinburgh; Arthur D. Peill, Madagascar; William Hunter Robb, Glencaple; David Roger, Johnshaven; David R. Rolands, North Wales; James Stenhouse, Edinburgh; G. E. Stewart, Canada; Andrew Wallace, Prestonpans.

HAROLD J. STILES, M.B., *Demonstrator.*

Mr Scott Carmichael, Edinburgh, and Mr Angus Macdonald, M.A., Edinburgh, acted as Class Assistants.

JOHN CHIENE, M.D., *Professor.*

MIDWIFERY.

SENIORS.

FIRST-CLASS HONOURS.—1. A. M. Easterbrook, England (*Medallist*); 2. G. D. Dupont, England; 3. G. P. Coldstream, India; 4. A. C. Ainslie, Scotland; 5. Hugh Walker, Scotland; 6. T. Roberts Williams, Wales; 7. N. L. Robinson, England.

SECOND-CLASS HONOURS.—8. A. Mackintosh, Scotland; 9. J. Penny, Scotland; 10. S. D. Graham, Scotland; 11. Thos. Smith, Scotland; 12. D. M. Ferguson, Scotland; 13. Donald Macdonald, Scotland; and J. C. Atkinson, South America—equal.

JUNIORS.

FIRST-CLASS HONOURS.—1. W. E. Fothergill, England; 2. W. J. Garbutt, England; 3. J. G. Macnaughton, Scotland; and A. Paget Steavenson, England—equal (*Medallists*); 5. C. A. Hogg, Tasmania; J. P. Stewart, Scotland; and J. Tennant, Scotland—equal; S. R. W. Briggs, England; C. Crerar, Scotland; and R. A. Constantian, Cilicia—equal; 11. W. M. M'Larty, England, and D. H. Sutherland, Australia—equal; 13. J. B. Duff, Scotland, and D. Thomas, Scotland—equal; 15. P. D. Fick, South

Africa, and W. F. M'A. Hewlings, England—equal; 17. T. Farthing, England; J. Kippax, England; and H. Vaughan Williams, Wales—equal; 20. W. C. Anderson, Scotland; A. Balfour, Scotland; R. W. Center, Scotland; D. M'Neil, Scotland; and J. Steed, England—equal; 25. A. Croll, Scotland; 26. A. Hill Buchan, Scotland; E. A. Darling, United States; and F. P. Hearder, Wales—equal; 29. Lachlan Grant, Scotland; A. H. Moorhead, Mauritius; R. H. Makgill, New Zealand; and W. B. Turnbull, Scotland—equal; 33. W. M'D. Selby, Scotland; 34. R. C. Dun, Scotland; D. Findlay, Scotland; J. Hume, Scotland; S. W. Prowse, Canada; and James Wood, Scotland—equal.

SECOND-CLASS HONOURS.—39. J. R. Gilmour, Scotland; E. W. T. Ireland, Tasmania; F. W. Langton, J. E. Rogers, New Zealand; and R. W. Innes Smith, Scotland—equal; 44. J. V. Forrest, Scotland, and J. P. Silver, Canada—equal; 46. J. T. Grant, Scotland, and D. A. Welsh, Scotland—equal; 48. J. Blyth, Scotland, and E. C. Edwards, Scotland—equal; 50. J. W. Hyslop, Scotland, and J. Lawrie, Scotland—equal; 52. G. A. Dickson, Scotland; J. Pearse, Madagascar; A. Philip, Scotland; and M. B. Stewart, Scotland—equal; 56. G. Phillips, China, and J. Sorley, Scotland—equal; 58. W. B. Craig, Scotland; J. M. Menzies, Scotland; and J. L. Sykes, England—equal; 61. H. B. Gladstone, England, and C. Kerr, Scotland—equal; 65. M. Burnett, Scotland; J. Clark, Scotland; H. A. C. Davidson, Scotland; G. E. Gabites, New Zealand; T. J. Jehu, Wales; and R. A. Wilson, South Africa—equal; 69. W. Anderson, Ireland; A. Foster, H. Grey, Scotland; and C. E. Salt, England—equal; 73. E. E. Waters, England; 74. G. F. Leicester, England; 75. J. G. Fraser, Scotland; W. R. Jackson, Scotland; and H. S. Walsh, England—equal; 78. H. Scott, Scotland; 79. C. W. Holme, England, and A. J. N. Paget, England—equal; 81. T. Gibson, Australia, and C. Hardcastle, Australia—equal; 83. C. J. H. Aitken, Scotland, W. Bethune, Scotland—equal; 85. R. W. Cappie, Scotland, and D. N. Chatterjee, India—equal; 87. E. P. Dickin, England; A. J. Kennedy, and G. D. Gray—equal; 90. T. P. Monteath, Canada.

The following gentlemen, through illness, were only able to attend two examinations, but gained the following percentage in these:—

SENIORS.

J. D. M'Latchie, Scotland, 82; R. Ballantine, Scotland, 54.

JUNIORS.

W. E. Scott-Moncrieff, Scotland, 79; J. D. Macrae, Scotland, 73; S. Saliba, Syria, 73; D. Murray, Scotland, 69; D. M. Conacher, Scotland, 61; G. Laing, Scotland, 60; A. S. Boyd, Scotland, 55.

OPERATIVE MIDWIFERY AND GYNECOLOGY.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. C. C. Easterbrook, Scotland (*Medallist*); 2. J. L. Dick, Scotland; 3. J. K. Watson, England; 4. T. G. Macormack, Scotland; 5. J. L. Russell, Scotland; 6. W. C. Fraser, Scotland, and W. P. Simpson, Scotland—equal.

A. R. SIMPSON, M.D., *Professor*.

PRACTICE OF PHYSIC.

SENIORS.

FIRST-CLASS HONOURS.—1. Alexander M. Easterbrook, England; James V. Paterson (M.A.), Sanquhar; and D. A. Welsh (M.A., B.Sc.), Forfarshire—equal (*Medallists*); 4. Hugh Walker, Scotland; 5. A. A. Scot-Skirving, Scotland; 6. James C. Maxwell, (M.A.), Scotland, and James Wood, Burntisland—equal; 8. C. Brian Dobell, England; 9. Thomas Farthing, England, and T. Browne Hearder, Edinburgh—equal; 11. A. Hill Buchan, Edinburgh; J. D. P. M'Latchie, Scotland; and C. P. Stewart, Perth—equal; 14. H. P. Barlow, Surrey; F. W. Langton (B.A.), Australia; and George MacGibbon, Stranraer—equal; 17. Thomas Smith, Scotland; 18. James Gibson Cattanach, Scotland; and George P. Coldstream, Lahore—equal.

SECOND-CLASS HONOURS.—20. A. C. Matchett, Malvern; 21. R. W. Duncan, Cornwall; 22. Robert B. Campbell, Scotland; A. Mearns Fraser, Bute; A. G. M'Intyre, Scotland; and T. J. Thomson, Edinburgh—equal; 26. Earnest A. Dent, Wolverhampton; F. T. Gourlay, Edinburgh; and Muir Sandeman, Lanarkshire—equal; 29. D. B. Crerar, Perthshire, and William Thompson Hall, Northumberland—equal; 31. Allan S. Boyd, Scotland; A. W. Cameron, Scotland; George A. Cohen, Hull; J. H. Phyn, Forfarshire; and Edward Robinson, Yorkshire—equal; 36. Robert Riddell, Lauder, and A. P. Ross, England—equal; 38. H. P. Bennett, Yorkshire; W. C. Hamilton, New Zealand; R. C. Jameson, Manchester; and C. T. C. Kingdon, Derbyshire—equal; 42. William Robert Martine, Haddington, and J. Murray Sutter, Scotland—equal; 44. B. W. Broad, Monmouthshire, and J. E. Hewlett, Edinburgh—equal; 46. D. Monteith Ferguson, Edinburgh; Charles S. Glegg, Edinburgh; and Z. M. Zorab, Calcutta—equal; 49. G. B. Anderson, Dumfriesshire; P. Campbell, Scotland; R. A. Constantian, Asia Minor: W. E. Jameson, England; D. Gray, Newton, India; and W. H. Robertson, Scotland—equal; 55. Richard Kenyon, Islay; John Penny, England; and M. Barrow Ray, Yorkshire—equal; 58. C. R. Edmondson, Liverpool; 59. Harry Weighton, Scotland; 60. W. A. Hardiker, England.

Absent from One Examination:—*First-Class Honours*—W. E. Foggie, Dundee. *Second-Class Honours*—Archibald Gardner, Edinburgh.

JUNIORS.

FIRST-CLASS HONOURS.—1. John B. Duff, Helensburgh; 2. Andrew Balfour, Edinburgh; 3. D. W. Sutherland, Victoria, and C. A. Hogg, Tasmania—equal; 5. W. M'D. Selby, Wigtownshire; 6. John Tennant, M.A., Ayr (*Medallists*); 7. John Steed, Baldock; W. B. Turnbull, Scotland; and H. Vaughan Williams, Wales—equal; 10. John Lawrie, Ayr, and David Thomas, Lockerbie——equal; 12. R. W. Briggs, Derby; James Pearse, Madagascar; and G. V. A. Robertson, Yorkshire—equal; 15. John Kippax, Lancashire, and J. H. Thomson Walker, Newport—equal; 17. Eugene A. Darling, U.S.A.; Lachlan Grant, Scotland; and J. E. Rogers, New Zealand—equal; 20, W. R. Center, Aberdeenshire, and Robert Craig Dun, England—equal; 22. Andrew Croll, Dundee; W. H. Gaunt, Australia; J. Rutherford Gilmour, Edinburgh; and T. R. Scott Sibbald, Dumfriesshire—equal; 26. E. H. Fraser, England; A. Gwyther, India; S. Saliba, Syria; and A. Paget Steavenson, Darlington—equal.

SECOND-CLASS HONOURS.—30. F. P. Hearder, Wales; J. W. Hyslop, Scotland; Charles Kerr, Dundee; George Phillips, China; and Ernest E. Waters, England—equal; 35. W. C. Anderson, Scotland; C. Crerar, England; R. H. Makgill, New Zealand; W. F. M'Allister-Hewlings, Leicester; J. G. M'Naughton, Bathgate; and Tom B. Moore, America—equal; 41. Andrew M. Fleming, Edinburgh; 42. E. C. Edwards, Woodbridge; J. T. Grant, Scotland; and J. M. Menzies, Scotland—equal; 45. A. M. N. Pringle, Aberdeen; 46. P. W. Macvean, Perthshire, and R. A. Wilson, Cape Colony—equal; 48. T. J. Jehu, Wales; D. S. Johnston, Inverness; Henry Scott, Selkirkshire; and J. P. Silver, Canada—equal; 52. E. Ireland, Tasmania, and Andrew Philip, Kirkcaldy—equal; 54. John C. Caldwell, Edinburgh; David Finlay, Scotland; and C. G. Murray, Barbadoes—equal; 57. J. G. Fraser, Ross-shire; C. Hardcastle, Australia; S. W. Prowse, Canada; J. W. Sutcliffe, Creetown; J. L. Sykes, England; and H. S. Walsh, England—equal; 63. J. M. Buist, Scotland; David Murray, Hawick; and Murray B. Stewart, Edinburgh—equal; 66. D. A. Johnstene, Carlisle; Cecil E. Salt, Shrewsbury; and C. M. Simpson, Leslie—equal; 69. E. P. Dicken, Shipley; 70. C. W. Branch, West Indies; Arthur Foster, Blackburn; George D. Gray, Scotland; James Gray, England; R. E. Legat, Scotland; Hugh M'Donald, Glasgow; T. P. Monteath, Canada; and James G. Walker, Calcutta—equal; 78. D. N. Chatterjee, Calcutta; W.

Briggs Clarke, Barbadoes; and J. H. Reynolds, Gloucestershire—equal; 81. Thomas Evans, Wales; J. Lloyd Owen, North Wales; and R. K. Tandan, Agra—equal; 84. R. Y. Anderson, Scotland; J. V. Forrest, Ayr; John Hume, Perth; and Frank Oliphant, London—equal; 88. Alexander Rodger, Edinburgh; 89. A. J. Kennedy, Inverness; 90. W. R. Jackson, Perth; 91. A. J. M. Paget, Cambridge, and John K. Richards, Australia—equal.

Absent from one Examination.—*First-Class Honours*—W. R. Strap, Natal.

T. GRAINGER STEWART, M.D., *Professor.*

MEDICAL JURISPRUDENCE.

SUMMER SESSION, 1892.

FIRST-CLASS HONOURS.—1. H. B. Gladstone; 2. A. M. N. Pringle; 3. A. Croll (*Medallists*); 4. Robert Hanten.

SECOND-CLASS HONOURS.—5. J. B. Duff; 6. J. P. Stewart; 7. Wm. M'D. Selby, G. Smith, and W. R. Strapp—equal; 10. Fredk. P. Hearder and H. M'Donald—equal; 12. A. H. Buchan; 13. A. C. Ainslie and J. C. Caldwell—equal; 15. John D. Duncan and G. F. Leicester—equal; 17. D. A. Welsh; 18. Andrew Philip and R. W. I. Smith—equal; 20. W. R. Center; 21. William Mailer; 22. R. W. Briggs; 23. W. T. Hall; 24. D. Thomas and C. S. Glegg—equal; 26. D. S. Johnstone, A. J. M'Dougall, and T. Pettey—equal; 29. C. A. Hogg; 30. J. H. Jones; 31. E. Ireland and A. Macnicol—equal; 33. Edward L. Owen; 34. R. W. Cappie and D. M. Ferguson—equal; 36. E. C. Edwards and J. Grant—equal; 38. A. L. de Jager.

SPECIAL COURSE IN PUBLIC HEALTH.

WINTER SESSION, 1892-93.

FIRST-CLASS HONOURS.—1. Andrew M'Neil; 2. W. B. Turnbull; 3. John Steed (*Medallists*); 4. Robert Craig Dun; 5. A. Hill Buchan.

SECOND-CLASS HONOURS.—6. S. Glanville Morris, David Thomas, and Lachlan Grant—equal; 9. D. A. Welsh; 10. E. C. Edwards; 11. John Kippax and Wm. M'D. Selby—equal; 13. W. R. Center; 14. H. P. Bennett; H. A. C. Davidson; 16. A. M. Fleming, J. G. M'Naughton, and C. Hardcastle—equal; 19. C. J. H. Aitken, Andrew Croll, and W. T. Hall—equal; 22. George Smith; 23. J. M. Menzies; 24. Wm. B. Bell; 25. John Hume; 26. Andrew Philip; 27. Charles P. Stewart; 28. W. B. Craig and C. Crerar—equal; 30, J. Grant and D. S. Johnston—equal; 32. R. W. Briggs and W. Duff—equal.

DOUGLAS MACLAGAN, Kt., M.D., *Professor.*

CLINICAL SURGERY.

First-Class Honours.—1. A. K. Campbell (*Medallist*); 2. D. A. Welsh.

Second-Class Honours.—3. Wm. Mitchell; 4. M. R. Crichton; 5. C. F. Lassale; 6. J. M. Rutherford; 7. W. C. Stevenson; 8. A. A. Scot-Skirving; 9. C. Hardcastle; 10. E. N. Tandant; 11. R. Cochrane; 12. Wm. Leslie and W. A. Stephen—equal; 14. J. E. Paterson, D. W. Mackay, and E. G. Richards—equal; 17. R. J. Smith.

THOMAS ANNANDALE, M.D., *Professor.*

MENTAL DISEASES.

First-Class Honours.—1. D. A. Welsh (M.A. B.Sc.), and J. B. Yeoman—equal (*Medallists*); 3. R. Hutchison; 4. W. A. J. Alexander; 5. J. J. Kindred, M.D.; 6. J. C. Brush, M.B., C.M., and A. G. Talbot, M.A.—equal; 8. W. E. Foggie, M.A., Alexander Ingram, and Lim Boon Keng—equal; 11. William Scott.

Second-Class Honours.—12. Robert Allan; 13. D. B. Hewat; 14. George M'Gibbon; 15. C. R. Nair; 16. J. J. Evans; 17. Peter Campbell.

T. S. CLOUSTON, M.D., *Lecturer.*

DISEASES OF THE EYE.

First-Class Honours.—1. Arthur Fells (*Medallist*); 2. J. L. Russell and J. C. Maxwell—equal (*Prizemen*); 4. O. B. Robson; 5. J. C. Brush, M.B., C.M.; 6. J. D. P. M'Latchie; 7. J. M'Donald, R. Constantian, A. Ingram, and P. St Clair More—equal.

For the Lecturer,
GEO. A. BERRY, M.B., F.R.C.S.

Examination Papers for Degrees in Medicine.

PRELIMINARY EXAMINATION.

ARITHMETIC.

Tuesday, 4th October 1892.—9 *to* 11 *o'clock.*

1. Find the cost of 1275 articles at £2, 18s. 4d. each.

2. Define the L. C. M. of two or more numbers, and find the L. C. M. of 8, 12, 30, 42, 60.

What is meant by a prime factor of a number? Find the prime factors of 300300.

3. From the sum of $\frac{1}{3}$ and $\frac{1}{5}$, subtract the sum of $\frac{1}{7}$ and $\frac{1}{9}$.

$$\text{Simplify } \frac{\frac{1}{8}-\frac{1}{27}}{\frac{1}{2}-\frac{1}{3}} \div \frac{\frac{1}{9}-\frac{1}{16}}{\frac{1}{3}+\frac{1}{4}}.$$

4. Multiply 42·02 by ·0013, and find the square of 27·0231459 correctly to four decimal places.

5. A metre contains 39·371 inches; prove that the difference between 5 miles and 8 kilometres is nearly 51 yards.

6. If 4 per cent. be lost by selling at 9d. a yard, what price will produce a gain of $12\frac{1}{2}$ per cent.?

7. Find the true discount on £106, 9s. 5d. for 3 years, 2 months, at 6 per cent.

8. What will £1000 amount to in 3 years at 4 per cent. compound interest, payable annually?

9. Divide 1845 into four parts proportional to 1, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{6}$.

10. A sum of £1325 is borrowed, to be paid back in two years by two equal annual payments, allowing 4 per cent. simple interest. Find the annual payment.

ARITHMETIC AND ELEMENTARY MATHEMATICS.

Monday, 3rd April 1893.—1 *to* 4 *o'clock.*

1. If two sides and the contained angle of one triangle be equal to two sides and the contained angle of another triangle, the two triangles shall be equal in every respect.

From the vertices of an equilateral triangle ABC equal lengths AR, BP, CQ are measured along the sides AB, BC, CA respectively. Shew that the triangle PQR is also equilateral.

2. In any right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the other sides.

In a right-angled triangle, one of the acute angles is double of the other; prove that the square on the side opposite the greater angle is three times the square on the side opposite the lesser angle.

Construct a square which shall be equal to one-third of a given square.

3. The straight line AB is bisected at C and produced to D; show that the rectangle contained by AD, BD is equal to the difference of the squares on CD and AC.

Shew also that four times the rectangle contained by CD and AC is equal to the difference of the squares on AD and BD. Enunciate a proposition which shall include both the above theorems.

4. If a straight line drawn through the centre of a circle bisect a chord which does not pass through the centre it shall cut it at right angles, and if it cut it at right angles it shall bisect it.

In a given circle draw a chord parallel to a given straight line so that its middle point may lie on a given chord.

5. When two circles touch externally the line joining their centres passes through the point of contact.

Given the radius of a circle, show how to find its centre when it passes through a given point and touches a given circle.

6. Multiply 23·08 by 3·5471638 correctly to three decimal places.

A cubic centimetre of water weighs a gramme; a metre is equal to 39·3704 inches, and a lb. is equal to ·4536 kilogrammes. Find how many cubic feet of water weigh a ton.

7. Find the true discount on £1000 for 9 months at 4 per cent. per annum.

A sum of £2000 is borrowed and is to be paid back in two years by two equal annual payments, allowing 5 per cent. simple interest. Find the annual payment.

8. Find the co-efficient of x^4 in the expansion of $(1-x+x^2)^3$.

Expand the product

$$(a+b-2c)(b+c-2a)(c+a-2b).$$

9. Find the G.C.M. of x^6-6x+5 and x^3-3x+2.

Factorise the expressions

(i) $x^2+9x-52$; (ii) $xy+8x-7y-56$; (iii) $(1+xy)^2-(x+y)^2$.

10. Reduce to single fractions in their lowest terms

$$\text{(i)}\ \frac{1}{x^2-3x+2}-\frac{1}{x^2+2x-3}+\frac{1}{x^2+x-6}.$$

$$\text{(ii)}\ \frac{(1+xy)^2-(x+y)^2}{(1+x)(1+y)}+\frac{(1-xy)^2-(x-y)^2}{(1-x)(1-y)}.$$

11. Solve the following equations

$$\text{(i)}\ \frac{x-a}{x-b}=\frac{x-2a+b}{x-2b+a}$$

(ii) $3x+5y=1$, $7x+9y=1$.

12. The sum of the two digits composing a number is 15. The difference between the original number and the number formed by reversing the digits is 9. Find the number.

ELEMENTARY MATHEMATICS.

Tuesday, 4th October 1892.—11.30 *to* 1.30 *o'clock.*

1. The greater side in any triangle has the greater angle opposite to it.

In the quadrilateral *ABCD*, *AD* is the longest and *BC* the shortest side; prove that the angle *ABC* is greater than *ADC*.

2. Construct a triangle equal in area to a given polygon.

3. Prove the proposition which establishes the relation, in an obtuse-angled triangle, between the square on the side opposite the obtuse angle, and the squares on the sides containing it.

Y and Z are the intersections of the diagonals of squares described on the sides AC, AB of a triangle ABC, right-angled at A; shew that

$$2BY^2+AC^2=2CZ^2+AB^2.$$

4. In a circle equal chords are equally distant from the centre, and chords which are equally distant from the centre are equal.

Draw, in a circle, a chord of given length, parallel to a given straight line.

5. The rectangle contained by the segments of any chord passing through a point outside a circle is constant, and equal to the square on the tangent from that point to the circle.

6. Find the co-efficient of x^4 in the expansion of $(1-x+x^2-x^3)^2$ in powers of x.

Expand and arrange symmetrically

$$(x^2-yz)(y+z)+(y^2-xz)(z+x)+(z^2-xy)(x+y).$$

7. Divide $x^{10}+x^5+1$ by x^2+x+1.

Find the factors of

$$(1)\ x^2+(a+b)x+ab.$$
$$(2)\ x^3+(a+b)x^2+(ab+1)x+b.$$

8. Reduce to their simplest forms the following fractions

$$(1)\ \frac{1}{x+1}+\frac{1}{x+2}-\frac{1}{x^2+3x+2}$$

$$(2)\ \left(\frac{x^2}{y}-\frac{y^2}{x}\right)\left(\frac{x+y}{x-y}-\frac{x-y}{x+y}\right).$$

9. Solve the equations

$$(1)\ \frac{x-1}{2}+\frac{2x-1}{3}+\frac{3x-1}{4}=7.$$

$$(2)\ a(x+y)+b(x-y)=1$$
$$c(x+y)+d(x-y)=1.$$

10. The three digits forming a number ascend by a common difference and their sum is 15. The number is less by 3 than 6 times the number formed by reversing the digits; find the number.

HIGHER MATHEMATICS.

Tuesday, 4th October 1892.—2 *to* 4 *o'clock.*

1. Prove the theorem regarding the inequality of the perpendicular and the obliques from a given point to a given straight line.

2. If a triangle and a parallelogram be upon the same base and between the same parallels, the area of the parallelogram is double that of the triangle.

P is a point within the parallelogram $ABCD$; prove that the difference of the areas of PAB and PAD is equal to the area of PAC.

3. The tangent to a circle is at right angles to the radius drawn to its point of contact.

With a given radius, describe a circle to touch two given circles.

4. If three or more straight lines cut two parallels proportionally, they pass through a common point. In what case is the point at infinity?

5. The lines of intersection of two parallel planes by a third plane are parallel. Prove also that a line parallel to each of two intersecting planes is parallel to their line of intersection.

6. Given the focus and directrix of a parabola, show how to find any number of points on the curve.

Given the focus of a parabola and two points on the curve, find the directrix.

7. Write down the most general homogeneous and symmetrical function of x and y of the second degree.

Show that

$z^2(x-y)^2+y^2(z-x)^2+zy(x-y(z-x)$ is a homogeneous and symmetrical function of x, y, z.

8. Find the rationalizing factor of $\sqrt{p}+\sqrt{q}+\sqrt{r}$.

Simplify $\dfrac{1}{1-x-\sqrt{x^2+1}}-\dfrac{1}{1+x+\sqrt{x^2+1}}$

9. Find the condition that the roots of the equation $x^2+px+q=0$, should be (1) real; (2) real and equal.

Determine the real roots, if any, of the following equation:—

$$\frac{a}{x}+\frac{b}{x-a+b}=\frac{a+b}{2x-a+b}$$

10. How much should be paid for an annuity of £250 to last for 9 years, the first payment to be made a year hence, reckoning compound interest at 4 per cent? Express the answer in pounds and decimals of a pound.

[Given log. 104 = 2.0170333, and log. 1·702587 = ·8467003.]

11. Assuming the formula for sin $(A-B)$ and cos $(A-B)$, prove that

$$\tan(A-B)=\frac{\tan A-\tan B}{1+\tan A\tan B}$$

Prove that $\tan 15^\circ=2-\sqrt{3}$.

12. Investigate an expression for the area of a triangle in terms of its sides. Compare the areas of the triangles whose sides are a, b, c;

and $3a$, $\sqrt{2a^2+2c^2-b^2}$, $\sqrt{2a^2+2b^2-c^2}$.

Thursday, 6th April 1893.—1 *to* 4 *o'clock.*

[*Ten Questions only to be answered.*]

1. Triangles on the same base and between the same parallels are equal.

Give a construction for converting any plane polygon into a triangle of equal area.

2. In any triangle the square on the side opposite an acute angle is equal to the sum of the squares on the other two sides diminished by twice the rectangle contained by either of those sides and the projection on it of the other side.

In a trapezium the sum of the squares on the diagonals is equal to the sum of the squares on the non-parallel sides together with twice the rectangle contained by the parallel sides.

3. Shew how to circumscribe a circle to a given triangle.

Shew how to construct the circles which pass through two vertices of a triangle and touch a side. How many such circles are there?

4. Draw a tangent to a circle from a given external point.

Through a given external point draw a secant which shall cut off from the circle a segment containing a given angle.

5. Define similar figures, and show that triangles which are equiangular are also similar.

Three circles have a common chord PQ, any secant through P meets the circles in A, B, C; shew that these points divide the secant in fixed ratios.

6. Shew how to draw a tangent to a parabola through a given external point.

Given the focus of a parabola, a tangent, and a point on the curve, find the directrix.

7. The straight line at right angles to each of two intersecting straight lines in a plane, is at right angles to the plane.

In a given plane draw a straight line perpendicular to a given straight line in space.

8. Find directly the condition that x^3+px+q should be divisible (1) by $(x-a)$, (2) by $(x-a)^2$.

Find the real factors of $x^4-1-4(x-1)$; find also the two linear and the quadratic factor of

$$(x^2-yz)^2-(y-zx)(z^2-xy).$$

9. Find the greatest common measure of $(x-1)^2$, $(x^2-1)^2$, and x^7-7x+6.

Express as single fractions in their lowest terms

(1) $\{(1-a^2)(1-b^2)-4ab\}/\{(1-a)(1-b)-2ab\}$

(2) $\dfrac{1}{(1+bc)^2-(b+c)^2}+\dfrac{1}{(1+ac)^2-(a+c)^2}+\dfrac{1}{(1+ab)^2-(a+b)^2}.$

10. Find a rationalising factor for $\sqrt{3}-1$, and also for $\sqrt[3]{3}-1$.

Find the value of $\left\{\sqrt{a^2+x^2}+x\right\}/\left\{\sqrt{a^2+x^2}-x\right\}$ when x is equal to $(b-c)a/2\sqrt{bc}$.

11. Find the limits within which m must lie in order that the roots of the equation $x^2-4(m-1)x+(m-1)(m-2)=0$ may both be real.

Solve the equations

$$(1)\quad (x+a)^2/(x+b)^2=(2x+a+c)/(2x+b+c).$$
$$(2)\quad x+y=a,\ x^3+y^3=ab^2.$$

12. Find the sum (1) of n successive integers, (2) of the squares of the same integers.

Shew that the sum of all the products in a multiplication table going up to n times n is $\frac{1}{4}n^2(n+1)^2$.

13. Find an expression for all the angles which have a given sine, and shew in any manner that $\sin 18^\circ \sin 54^\circ=1/4$.

Find all the solutions of the equation

$$1/\sin\theta=1/\sin 2\theta+1/\sin 3\theta.$$

14. If one angle of a triangle be 60°, and the sides which contain it as 19 : 1 ; find the other two angles, given

$$\log 3=\cdot 4771213\quad L\tan 57^\circ,\ 19',\ 11''=10\cdot 1928032.$$

15. Find an expression for $\tan\frac{1}{2}A$ in terms of the sides of the triangle ABC. Shew that

$$(b+c-a)\tan\tfrac{1}{2}A=(c+a-b)\tan\tfrac{1}{2}B=(a+b-c)\tan\tfrac{1}{2}c.$$

If r, r_1, r_2, r_3 be the radii of the inscribed and escribed circles of the triangle, shew that

$$\tan^2\frac{A}{2}=(r_1-r)/(r_2+r_3)=rr_1/r_2r_3.$$

ENGLISH.

Wednesday, 5*th October* 1892.—9 *to* 11 *o'clock.*

1. Take down the following passage, attending carefully to spelling and punctuation :—

(*Passage to be dictated here.*)

2. Write a short essay, neatly expressed, and well punctuated, on either of the following subjects :—

(1) One of Scott's novels.
(2) The greatness of a country.

3. What parts of speech may "that" be? Exemplify. Give the history of the use of the word. When may it not be used as the relative?

4. Explain the prefix in answer, anon, aware, atom, anatomy, forgive, withstand, dysentery.

5. Explain the use of "shall" and "will" in asking questions.

6. Re-write in reported speech :—"I shall try, I say, and you, my friends, will see what one may do, here and now, to combat this evil. Do you think I cannot? Wait and you will see."

7. Locate and annotate (very shortly) :—Barrow, Coventry, Middlesborough, Benares, Lahore.

8. What do you know about our trade with India, export and import? How is it affected by a change in the gold value of the rupee?

9. Write *full* notes upon *two* of the following :—The Petition of Right ; Catholic Emancipation ; Walpole's Excise Bill ; The Instrument of Government ; the Corn Laws ; the Income Tax.

10. Put down what you know about *three* of the following :—The Bard ; The Cenci ; Comus ; Christabel ; Lycidas ; The Hind and the Panther ; The Tale of a Tub ; Shortest way with the Dissenters ; Sartor Resartus.

Monday, 3rd April 1893.—9 *to* 12 *o'clock.*

1. Take down the following passage, attending carefully to spelling and punctuation :—

(*Passage to be dictated here.*)

2. Write a short Essay on *one* of the following subjects :—

(1) Milton. (2) Byron. (3) Choosing a Career.

3. Write grammatical notes upon—twice a week ; it is me ; the more the merrier ; farther ; children ; you may go.

4. Analyse—(1) *Methinks* wisdom is nearer when we stoop *than* when we soar ; (2) *That* we *would do* we *should* do when we would. Parse the words in italics.

5. Remark on the following forms :—In writing an answer ; in the writing an answer ; in writing of an answer ; in the writing of an answer.

6. Distinguish—amend *and* emend ; illusive *and* elusive ; contrast *and* contradiction ; wit *and* humour.

7. Justify or condemn the following :—Either you or I are in the wrong. Both of the prisoners, or one of them at least, were present. Looking to the last election, the chances of the two candidates are about even, and it is not possible to predicate either who is the best of the two, nor which will prove the more superior.

8. Write historical notes on *four* of the following :—The origin of the English people ; Simon de Montfort ; Becket ; Wolsey ; tonnage and poundage ; the Star Chamber Court ; the Seven Years' War ; the Factory Acts.

9. What are our chief textile industries? What is their relative importance? In what districts are they chiefly carried on? Whence is the raw material got? How do we pay for it?

NATURAL PHILOSOPHY.

Wednesday, 5th October 1892.—11.30 *to* 1.30 *o'clock.*

1. Define Elasticity, and explain how it enables us to distinguish between solids and fluids.

2. Define the terms Pitch and Intensity in relation to musical notes. Why is it that the pitch of the note given by a tuning-fork does not vary with its intensity?

3. Sketch the course of the rays by which a luminous point is seen, after reflection at each of two parallel mirrors, by an observer standing between the mirrors.

4. Enumerate the facts from which it is inferred that radiant heat is a phenomena of the same nature as light.

5. What is meant by the specific heat of a gas at constant pressure, and at constant volume? Why is the former quantity greater than the latter?

6. Define Latent Heat. If the latent heat of water is 80, and of steam 537, find how many lbs. of ice at 0° C would be melted by a lb. of steam at 100° C.

7. Describe and contrast the fundamental phenomena of electrification by induction, and of induced magnetism.

8. What are the fundamental principles which are applied in the Galvanometer and in the Thermopile respectively, and for what purposes?

Friday, 7th April 1893.—1 *to* 4 *o'clock.*

1. Mention some ordinary phenomena due to viscosity in air and in water.

2. What are the chief conditions which influence the amount of evaporation at the free surface of a liquid?

Explain the formation of dew.

3. A wire, stretched by a force of 4 pounds sounds a certain note. What must be the tension of the wire to give a note with $\frac{5}{4}$ times as many vibrations per second?

4. Explain how a simple lens may be used as a magnifier. Sketch the position of the image and object, and the course of the rays from any point of the object to the eye.

5. How are the colours of the rainbow produced? Explain why the colours in the secondary bow are in the inverse order of the colours in the primary bow.

6. A 1 lb. mass of platinum of specific heat $\frac{1}{30}$ is heated to a high temperature and placed in 5 lbs. of water, the temperature of which it raises from 13° to 20° C. If no heat is lost by radiation, find the original temperature of the platinum.

7. Describe the Leyden Jar, explaining in what respects the invention is valuable.

8. Describe any process by which (1) heat, and (2) mechanical energy is transformed into electric current energy.

MECHANICS.

Wednesday, 5th October 1892.—2 *to* 4 *o'clock.*

1. What is meant by the component velocity of a point in any direction?

A point is moving simultaneously northwards, westwards, and upwards with equal speeds; find its resultant velocity.

2. A particle is projected upwards with a speed of 1600 feet per second. Find how high it will rise, and compare the distances passed over in the first and last seconds of its upward motion.

3. Distinguish between the mass and the weight of a body; and explain how it is proved that, in any one locality, they are proportional.

4. Explain how the units of Work and of Power are defined.

If the co-efficient of friction be ·01, find the horse-power required to draw a train of 150 tons, along a level line, at 20 miles an hour.

5. Masses of 1, 2, 3 lbs. are placed at distances 4, 5, 6, from a horizontal plane. Find the distance of their centre of gravity from the plane.

6. A system of pulleys consists of two blocks (three pulleys in each block), and one continuous rope fastened to the upper block. Sketch the system, and find the force which must be exerted to raise a ton attached to the lower block.

7. A tank, 5 feet square, and 6 feet deep, is half filled with water. Find the pressure on the bottom of the tank, and on one side. [1 cub. ft. of water equal to 62·5 lbs.]

8. State the conditions for equilibrium, and for stable equilibrium, of a floating solid.

Friday, 7th April 1893.—9 *to* 12 *o'clock.*

1. State the law by which velocities are compounded and resolved. Mention other kinematical or physical quantities which are compounded and resolved according to the same law.

A point has a velocity of 10 units in a direction making an angle of 60° with the horizon. Find the vertical and horizontal components of the velocity.

2. Define unit acceleration, and compare it with the acceleration of gravity.

With what speed must a stone be thrown upwards so as to attain its greatest height after 10 seconds? How many seconds will it take to attain a height equal to half its greatest height?

3. Define momentum, and show that force may be defined as the time-rate at which momentum varies.

Find the uniform force under which a mass of 1-12th of a lb. will acquire a speed of 1600 feet per second in 4 seconds. Find also through what space this force must have been exerted.

4. Define the foot-pound and the horse-power.

How many tons of material per hour could a 10-horse-power engine draw to the surface from a mine 1000 feet deep?

5. Define the centre of inertia of a body.

Masses of 1, 3, 5, and 7 pounds are placed at distances 2, 4, 6, 8 feet from a given horizontal plane; find the distance of their centre of inertia from the plane.

6. State the laws of statical friction, and define the coefficient of friction.

A body is placed on an inclined plane of 1 in 5, and is just about to slip down. Determine the coefficient of friction between the body and the plane.

7. Define density and specific gravity.

A body displaces $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ of its volume respectively, when it floats in different liquids. Compare the specific gravities of the liquids.

8. Prove that the pressure in a heavy liquid at rest is the same at all points of a horizontal plane.

A tank 4 feet square and 10 feet deep is filled with water. Find the pressure on the bottom of the tank and on one side. [The weight of a cubic foot of water is 62·5 lbs.]

9. Describe the action of a force pump.

The cross section of a force pump has an area of 5 square inches. With what pressure must it be forced down to be capable of raising water to an elevation of 100 feet?

LATIN.

Thursday, 6*th October* 1892.—9 *to* 11 *o'clock.*

I. Translate:—

Haud dubia res visa, quin per invia circa nec trita antea quamvis longo ambitu circumduceret agmen. Ea vero via insuperabilis fuit: nam cum super veterem nivem *intactam* nova modicae altitudinis esset, *molli* nec praealtae facile pedes *ingredientium* insistebant; ut vero tot hominum iumentorumque incessu dilapsa est, per nudam infra glaciem fluentemque tabem liquescentis nivis ingrediebantur. Taetra ibi luctatio erat *via* lubrica *glacie* non recipiente vestigium et in prono citius pedes *fallente*, ut, seu manibus in adsurgendo seu genu se *adiuvissent*, ipsis adminiculis prolapsis iterum corruerent; nec stirpes circa radicesve, ad quas pede aut manu quisquam *eniti* posset, erant: ita in levi tantum glacie tabidaque nive volutabantur. Iumenta secabant interdum etiam infimam ingredientia nivem, et prolapsa *iactandis* gravius in conitendo ungulis penitus perfringebant, ut pleraque velut pedica capta haererent in dura et alte concreta glacie.

II. (1) Parse fully the words italicised, accounting in each instance for the case or mood employed.

(2) Decline in the singular *veterem*, *taetra ;* and give the other degrees of comparison of *taetra*, *citius*, *infimam*.

III. Translate :—

Ut viginti annorum militiam vestram cum illa virtute, cum illa fortuna taceam, ab Herculis columnis, ab Oceano terminisque ultimis terrarum per tot ferocissimos Hispaniae et Galliae populos vincentes huc pervenistis : pugnabitis cum exercitu tirone, hac ipsa aestate caeso, victo, circumsesso a Gallis, ignoto adhuc duci suo ignorantique ducem. An me in praetorio patris, clarissimi imperatoris, prope natum, certe eductum, domitorem Hispaniae Galliaeque, victorem eundem non Alpinarum modo gentium, sed ipsarum, quod multo maius est, Alpium, cum semenstri hoc conferam duce, desertore exercitus sui?

Give the principal parts of the verbs—*vincentes*, *caeso*, *circumsesso*, *natum*, *conferam*.

IV. (1) Write down the abl. sing., the gen. plur., and the meaning of the words—*vis*, *vulnus*, *caedes*, *imber*, *supellex*, *genu*, *bos*, *alacer*, *vigil*, *effigies*.

(2) Decline and give the meaning of *uter*, *quisque*, *ambo*.

V. Translate :—

Hunc pro suis beneficiis Caesar idoneum iudicaverat, quem cum mandatis ad Cn. Pompeium mitteret, eundemque apud Cn. Pompeium auctoritatem habere intelligebat. Erat autem haec summa mandatorum. Debere utrumque pertinaciae finem facere et ab armis discedere neque amplius fortunam periclitari. Satis esse magna utrimque incommoda accepta, quae pro disciplina et praeceptis habere possent, ut reliquos casus timerent : illum Italia expulsum amissa Sicilia et Sardinia duabusque Hispaniis et cohortibus in Italia atque Hispania civium Romanorum centum atque XXX ; se morte Curionis et detrimento Africani exercitus, Antoni militumque deditione ad Curictam.

VI. Translate into Latin :—

About the same time ambassadors came from King Attalus announcing that the States of Asia also were disaffected (*sollicitari*). To these the answer was returned that the senate would look after it. Meantime three ambassadors were sent to Ptolemy, King of Egypt, to announce that Hannibal and the Carthaginians had been beaten, and to thank (*gratias agere*) the king, because at a critical time ("in doubtful affairs") when even allies close at hand (*finitimus*) were deserting Rome, he had remained in allegiance (*fides*), and to ask that, if they, compelled by injuries, entered on (*suscipere*) a war against Philip, he would maintain his old disposition (*animus*) towards the Roman people.

Wednesday, 5th April 1893.—2 *to* 5 *o'clock.*

1. Translate :—

Iamque omnibus satis conparatis ad traiciendum terrebant ex adverso hostes omnem ripam equites virique obtinentes. Quos ut averteret, Hannonem Bomilcaris filium vigilia prima noctis cum parte copiarum, maxime Hispanis, adverso *flumine* ire iter unius diei iubet et, ubi primum *possit*, quam occultissime traiecto amni circumducere agmen, ut, cum opus *facto* sit, *adoriatur* ab tergo hostem. Ad id dati duces Galli edocent inde milia quinque et viginti ferme supra parvae *insulae* circumfusum amnem latiorem, ubi dividebatur, eoque minus alto alveo transitum *ostendere*. Ibi raptim *caesa* materia ratesque fabricatae, in quibus equi virique et alia onera *traicerentur*. Hispani sine ulla mole in utres vestimentis coniectis ipsi *caetris* superpositis incubantes flumen tranavere. Et alius exercitus ratibus iunctis traiectus castris prope flumen positis nocturno itinere atque operis labore fessus quiete unius diei reficitur, intento duce ad consilium opportune *exsequendum*.

2. (1) Parse fully the words italicised, accounting in each instance for the case or mood employed.

(2) Decline *alius* in the singular, and *utres* throughout ; and give the other degrees of comparison of *prima*, *occultissime*, *parvae*.

3. Translate :—

Romae aut circa urbem multa ea hieme prodigia facta aut, quod evenire solet motis semel in religionem animis, multa nuntiata et temere credita sunt, in quis, ingenuum infantem semestrem in foro holitorio triumphum clamasse, et foro boario bovem in tertiam contignationem sua sponte escendisse atque inde tumultu habitatorum territum sese deiecisse, et navium speciem de caelo adfulsisse, et aedem Spei, quae est in foro holitorio, fulmine ictam, et Lanuvi hastam se commovisse, et corvum in aedem Junonis devolasse atque in ipso pulvinario consedisse, et in agro Amiternino multis locis hominum specie procul candida veste visos nec cum ullo congressos, et in Piceno lapidibus pluvisse, et Caere sortes extenuatas, et in Gallia lupum vigili gladium ex vagina raptum abstulisse. Ob cetera prodigia libros adire decemviri iussi ; quod autem lapidibus pluvisset in Piceno, novemdiale sacrum edictum, et subinde aliis procurandis prope tota civitas operata fuit.

Give the principal parts of the verbs *solet*, *escendisse*, *adfulsisse*, *congressos*, *pluvisset*.

4. Give the gender, declension, the genit. and abl. sing., and the genit. plur. of the nouns *virga*, *virus*, *littus*, *domus*, *ager*, *frater*, *nubes*, *comes*, *amnis*, *leo*, *imago*, *cliens*. Decline throughout *aliquis*, *quidam*.

5. Translate :—

Pompeius quoque, ut postea cognitum est, suorum omnium hortatu statuerat proelio decertare. Namque etiam in consilio superioribus diebus dixerat, priusquam concurrerent acies, fore, uti exercitus Caesaris pelleretur. Id cum essent plerique admirati, "scio me," inquit, "paene incredibilem rem polliceri ; sed rationem consilii mei accipite, quo firmiore animo in proelium prodeatis. Persuasi equitibus nostris (idque mihi facturos confirmaverunt), ut, cum propius sit accessum, dextrum Caesaris cornu ab latere aperto aggrederentur et circumventa ab tergo acie prius perturbatum exercitum pellerent, quam a nobis telum in hostem jaceretur. Ita sine periculo legionum et paene sine vulnere bellum conficiemus. Id autem difficile non est, cum tantum equitatu valeamus."

6. Translate into Latin :—

The Samnites had as commander that year C. Pontius, the son of a most prudent father, himself a consummate (*primus*) warrior and leader. When the ambassadors, who had been sent to Rome, returned without peace being made, he said, "Do not suppose that nothing has been achieved by this embassy. The anger of the Celestials, which lighted on us for breaking the treaty, has been removed (*expio*). As for those whose will it was (*quibus cordi fuit*) that we should be driven to seek for peace ; it was not their will that our embassy should be so haughtily spurned by the Romans. For what more could have been done to appease the gods and to conciliate (*mitigo*) men ?"

LOGIC.

Thursday, *6th October* 1892.—11.30 *to* 1.30 *o'clock.*

(*The Candidate may take either Paper* A *or Paper* B, *but must confine himself to the Paper he has chosen.*)

A

1. Convert—None but the good are brave.
   Some good men are not brave.
   Earth hath not anything to show more fair.
2. State and prove the rules of the Second Figure.
3. Give a concrete syllogism in Disamis, and show by both methods of Reduction that it is legitimate.
4. Explain the term *Ignoratio Elenchi.* Give two examples of the fallacy.
5. What are the marks of a "perfect definition"? Exemplify various errors in defining.
6. What are the conditions of legitimate Hypothesis? Illustrate by cases where they are not observed.
7. Give a concrete example of the Method of Concomitant Variations, and another of the Double Method of Agreement. When are these methods necessary?

B

1. Explain the difficulty of the interaction of mind and matter as it appeared to Descartes. How was it treated by Malebranche, Spinoza, and Leibnitz?
2. How did Hume treat Berkeley's doctrines about conscious and unconscious substance?

3. How does Berkeley prove that God is self-conscious?

4. Explain Berkeley's statement that "all knowledge and demonstration are about universal notions," not abstract ideas.

5. What is Berkeley's view of causation, (*a*) in our own action, (*b*) in nature?

6. What difficulties have suggested themselves to you regarding the main arguments of Berkeley?

Wednesday, 5th April 1893.—9 *to* 12 *o'clock.*

[*The Candidate may take either Paper A or Paper B, but must confine himself to the Paper he has chosen.*]

A

1. Distinguish between deductive and inductive inferences. State the axioms they presume. For what purposes of practical life is deductive reasoning employed?

2. What are the various kinds of definition? Select terms to which each is properly applicable, and define them. What are the common faults in logical definitions?

3. Why are certain forms of syllogism "reduced"? State a concrete syllogism in Felapton, and reduce it by both methods.

4. State the following in syllogistic form :—

    (1) All law is an abridgment of liberty, and, therefore, of happiness.

    (2) All zeal is not excellent, there being a zeal that outstrips discretion.

    (3) He may not be a Frenchman though all Frenchmen talk like him.

5. What is meant by the word "cause" in Inductive Logic? Show how causes are discovered by the method of agreement. How may the "plurality of causes" be a source of error in employing it? How may the error be eliminated?

6. State the argument by analogy. Give a concrete example. What is required to convert it into an argument whose value is determined by one of the inductive canons or methods?

B

1. With what differences of meaning has the word "idea" been used by philosophical writers? What does Berkeley mean by a "notion"? What is meant by "substance"?

2. What doctrines of Locke were controverted by Berkeley? How did Hume treat them? To what doctrines of Berkeley is he opposed, and on what grounds?

3. What does Berkeley mean when he says of material things that their *esse* is *percipi*? How does he distinguish between imagination of an object and perception of it?

4. What is the purpose of the Dialogue on Divine Visual Language? State the argument.

5. Give as full an account as you can of the philosophical doctrines of Descartes.

6. What difficulties have suggested themselves to you regarding the main arguments of Berkeley?

MORAL PHILOSOPHY.

Thursday, 6th October 1892.—2 *to* 4 *o'clock.*

1. Explain fully what is meant by the statement—"Personality is the basis of morality."

2. What is the ground of certainty in deciding upon the moral quality of this or that action? Explain how different people happen to decide differently.

3. What is the value of Remorse (*a*) as a criterion, (*b*) as a motive?

4. Analyse the emotion of Anger.

5. What is the emotion of Tenderness? Give a short account of its species.

6. Give as full an account as you can of the ethical doctrines either of Aristotle *or* of Kant.

GREEK.

Friday, 7th October 1892.—9 *to* 11 *o'clock.*

I. Translate:—

(1) μετὰ δὲ τοῦτο τῷ Ἐνυαλίῳ τε ἅμα ἐπηλάλαξαν καὶ ἐξανίσταται ὁ Κῦρος, καὶ εὐθὺς μετὰ τῶν ἱππέων λαβὼν πλαγίους τοὺς πολεμίους ὁμόσε αὐτοῖς τὴν ταχίστην συνεμίγνυεν· οἱ δὲ πεζοὶ αὐτῷ συντεταγμένοι ταχὺ ἐφείποντο, καὶ περιεπτύσσοντο ἔνθεν καὶ ἔνθεν, ὥστε πολὺ ἐπλεονέκτει· φάλαγγι γὰρ κατὰ κέρας προσέβαλλεν· ὥστε ταχὺ ἰσχυρὰ φυγὴ ἐγένετο τοῖς πολεμίοις.

ὡς δὲ ᾔσθετο Ἀρταγέρσης ἐν ἔργῳ ὄντα τὸν Κῦρον, ἐπιτίθεται καὶ αὐτὸς κατὰ τὰ εὐώνυμα, προεὶς τὰς καμήλους ὥσπερ Κῦρος ἐκέλευσεν. οἱ δὲ ἵπποι αὐτὰς ἐκ πάνυ πολλοῦ οὐκ ἐδέχοντο, ἀλλ' οἱ μὲν ἔκφρονες γιγνόμενοι ἔφευγον, οἱ δ' ἐξήλλοντο, οἱ δ' ἐνέπιπτον ἀλλήλοις. τοιαῦτα γὰρ πάσχουσιν ἵπποι ὑπὸ καμήλων.

(2) ὁ δὲ Ἀδούσιος ἄγων τὸ στράτευμα ἐπὶ τὴν Καρίαν ἦλθε, καὶ ἀπ' ἀμφοτέρων τῶν Καρῶν παρῆσαν πρὸς αὐτὸν ἕτοιμοι ὄντες δέχεσθαι εἰς τὰ τείχη ἐπὶ κακῷ τῶν ἀντιστασιαζόντων· ὁ δὲ Ἀδούσιος πρὸς ἀμφοτέρους ταὐτὰ ἐποίει· δικαιότερά τε ἔφη λέγειν τούτους ὁποτέροις διαλέγοιτο, λαθεῖν τε ἔφη δεῖν τοὺς ἐναντίους φίλους σφᾶς γενομένους, ὡς δὴ οὕτως ἂν μᾶλλον ἐπιπεσὼν ἀπαρασκεύοις τοῖς ἐναντίοις. πιστὰ δ' ἠξίου γενέσθαι, καὶ τοὺς μὲν Κᾶρας ὀμόσαι ἀδόλως τε δέξασθαι εἰς τὰ τείχη σφᾶς καὶ ἐπ' ἀγαθῷ τῷ Κύρου καὶ Περσῶν· αὐτὸς δὲ ὀμόσαι θέλειν ἀδόλως εἰσιέναι εἰς τὰ τείχη καὶ ἐπ' ἀγαθῷ τῶν δεχομένων.

Give the meaning of the following words, distinguishing carefully between them:—ἕκαστος, ἕκαστοι, ἑκάτεροι, ἀμφότεροι, ὁπότεροι.

II. In the above pieces parse fully :—*ταχίστην, συνεμίγνυεν, ἐφείποντο, προεὶς, ἐξήλλοντο, παρῆσαν, λαθεῖν, ἐπιπεσών, ἠξίου, ὀμόσαι.*

III. (1) Decline in the sing. *ὁ αὐτὸς, ἱππεύς,* and in the plur. *τοῦτο τὸ τεῖχος*; and give the genit. and voc. sing, of *σατράπης, ἀνήρ,* Ἕλλην, *βασιλεύς, σωτήρ.*

(2) Compare the adjectives *ἀξιόχρεως, βαθύς, μικρός, ταχύς.*

IV. Write down the 1st pers. sing. fut., 1st aor., 2nd aor., and perf. *active*,—the 1st pers. sing. perf. passive,—and the meaning of the verbs *ἀφαιρέω, χώννυμι, ὁράω, τυγχάνω, προσφέρω, ἥδομαι, ἀνατείνω, καταβαίνω, μένω, ἐφίημι.*

V. Translate into Greek :—

There has never been anyone more temperate than Cyrus.

To him who has virtue in his soul, the praise (*ἔπαινος*) of men brings little gain (*κέρδος*).

Would you not have been ashamed, if he had found you in this plight?

Pity (*ἐλεέω*) the sufferer as much as you please: nevertheless he learns by suffering.

He said he would be here in three days, unless he received a letter.

Thursday, 6th April 1893.—9 *to* 12 *o'clock.*

I. Translate :—

(1) *Ἔνθα δὴ δεινὴ μάχη ἦν καὶ δοράτων καὶ ξυστῶν καὶ μαχαιρῶν· ἐπλεονέκτουν μέντοι οἱ Αἰγύπτιοι καὶ πλήθει καὶ τοῖς ὅπλοις. τά τε γὰρ δόρατα ἰσχυρὰ καὶ μακρὰ ἔτι καὶ νῦν ἔχουσιν, αἵ τε ἀσπίδες πολὺ μᾶλλον των θωράκων καὶ τῶν γέρρων καὶ στεγάζουσι τὰ σώματα καὶ προς τὸ ὠθεῖσθαι συνεργάζονται πρὸς τοῖς ὤμοις οὖσαι. συγκλείσαντες οὖν τὰς ἀσπίδας ἐχώρουν καὶ ἐώθουν. οἱ δὲ Πέρσαι οὐκ ἐδύναντο ἀντέχειν, ἅτε ἐν ἄκραις ταῖς χερσὶ τὰ γέρρα ἔχοντες, ἀλλ' ἐπὶ πόδα ἀνεχάζοντο παίοντες καὶ παιόμενοι, ἕως ὑπὸ ταῖς μηχαναῖς ἐγένοντο. ἐπεὶ μέντοι ἐνταῦθα ἦλθον, ἐπαίοντο αὖθις οἱ Αἰγύπτιοι ἀπὸ τῶν πύργων· καὶ οἱ ἐπὶ πᾶσι δὲ οὐκ εἴων φεύγειν οὔτε τοὺς τοξότας οὔτε τοὺς ἀκοντιστάς, ἀλλ' ἀνατεταμένοι τὰς μαχαίρας ἠνάγκαζον καὶ τοξεύειν καὶ ἀκοντίζειν.*

(2) *τὸ μέντοι ἐκ τοῦδε οὕτως ἐγὼ γιγνώσκω ὅτι εἰ μὲν τρεψόμεθα ἐπὶ ῥᾳδιουργίαν καὶ τὴν τῶν κακῶν ἀνθρώπων ἡδυπάθειαν, οἳ νομίζουσι τὸ μὲν πονεῖν ἀθλιώτατον· τὸ δὲ ἀπόνως βιοτεύειν ἡδυπάθειαν, ταχὺ ἡμᾶς φημι ὀλίγου ἀξίους ἡμῖν αὐτοῖς ἔσεσθαι καὶ ταχὺ πάντων τῶν ἀγαθῶν στερήσεσθαι. οὐ γάρ τοι τὸ ἀγαθοὺς ἄνδρας γενέσθαι τοῦτο ἀρκεῖ ὥστε καὶ διατελεῖν, ἣν μή τις αὐτοῦ διὰ τέλους ἐπιμέληται· ἀλλὰ ὥσπερ καὶ ἄλλαι τέχναι ἀμεληθεῖσαι μείονος ἄξιαι γίγνονται καὶ τὰ σώματά γε τὰ εὖ ἔχοντα, ὁπόταν τις αὐτὰ ἀνῇ ἐπὶ ῥᾳδιουργίαν, πονήρως πάλιν ἔχει, οὕτω καὶ ἡ σωφροσύνη καὶ ἡ ἐγκράτεια καὶ ἡ ἀλκή, ὁπόταν τις αὐτῶν ἀνῇ τὴν ἄσκησιν, ἐκ τούτου εἰς τὴν πονηρίαν πάλιν τρέπεται.*

Give the meaning of the following words, distinguishing carefully between them :—*οὗτος—ὅδε—αὐτὸς—ὁ αὐτος—ὅς.*

II. In the above pieces parse fully :—*συγκλείσαντες—πόδα—εἴων—*

ἀνατεταμένοι — τρεψόμεθα — στερήσεσθαι — ἐπιμέληται—ἀμεληθεῖσαι—μείονος—ἀνῇ, giving the principal parts of each verb.

III. (1) Decline in full: *αὕτη ἡ γύνη, τὸ αὐτὸ ὄρος*; and give the genit. and voc. sing. and dat. plur. of: *δεσπότης, παρθένος, λαγώς, ποιμήν, ἡγεμών, ὄρνις, χάρις, νέκυς, ἱερεύς, γένος.*

(2) Give the compar. and superl. of: *ὀρθός, σαφής, ἡδύς, ταχύς, παλαιός, σώφρων, σόφως, μάλα, ἔξω, πολλάκις.*

IV. Write out 2d aorist imperative active and aorist imperative passive of *βάλλω.*

V. Translate into Greek:—

(1) Who are these that disturb (*κινέω*) the city with their words?
(2) The river is too deep for us to cross.
(3) He said that he would wait three days.
(4) When you see a man die happy, know that he has lived well.
(5) He thought that Cyrus was the wisest of all the kings he had seen.
6. If you honour the older men (comparative of *γεραιός*), the younger will honour you.

FRENCH.

Friday, 7*th October* 1892.—11.30 *to* 1.30 *o'clock.*

N.B.—*Candidates are reminded of the regulation that mere translation into English is not sufficient, but there must be translation of an English passage into each of the languages taken up.*

I. Translate into English:—

(*a*) Six mois s'étaient presque écoulés depuis le départ de la supplique, lorsqu'on vint avertir la famille qu'un courrier était à la poste avec des lettres pour quelques personnes. Prascovie y courut aussitôt et fut suivie de ses parents. Lorsque Lopouloff se nomma, le courrier lui remit un paquet cacheté contenant un passe-port pour sa fille, et prit un reçu de lui. Ce fut un moment de joie pour la famille. Dans l'abandon total où ils étaient depuis tant d'années, l'envoi de ce passe-port leur parut une espèce de faveur. Cependant il n'y avait dans le paquet aucune réponse du gouverneur aux demandes personnelles de Lopouloff. Pour sa fille, elle était libre, et l'on ne pouvait, sans la plus grande injustice, la retenir en Sibérie contre sa volonté. Le silence absolu que l'on gardait avec son père était plutôt une confirmation de sa disgrâce qu'une faveur. Cette triste réflexion dissipa bientôt l'impression de plaisir que lui avait fait éprouver la condescendance du gouverneur. Lopouloff s'empara du passe-port, et déclara, dans le premier moment d'humeur, qu'il n'avait consenti à le demander que dans la certitude qu'on le lui refuserait, et pour se délivrer des persécutions de sa famille.

(*b*) Mais du moins je n'étais pas seul alors; la présence de ma soeur rendait cette retraite vivante. J'entendais le bruit de ses pas dans ma solitude. Quand je revenais à l'aube du jour prier Dieu sous ces arbres, la porte de la tour s'ouvrait doucement, et la voix de ma soeur se mêlait insensiblement à la mienne. Le soir, lorsque j'arrosais mon jardin, elle se promenait quelquefois au soleil couchant, ici, au même endroit où je vous parle, et je voyais son ombre passer et repasser sur mes fleurs. Lors même que je ne la voyais pas, je trouvais partout des traces de sa présence. Maintenant il ne m'arrive plus de rencontrer sur mon chemin une fleur effeuillée, ou quelques branches d'arbrisseau qu'elle y laissait tomber en passant ; je suis seul : il n'y a plus ni mouvement ni vie autour de moi, et le sentier qui conduisait à son bosquet favori disparaît déjà sous l'herbe. Sans paraître s'occuper de moi, elle veillait sans cesse à ce qui pouvait me faire plaisir.

II. Translate into French :—

Philip Valois died in 1350, consumed by suspicion and cares. At the beginning of his reign, he was called the Fortunate, on account of the unexpected event which called him to the Crown, and of the success which he had in his first undertakings. But, in the sequel, fortune ceased to be favourable to him ; and his want of policy, as well as the superiority of his enemy, caused him to be despised by his subjects, whose idol he had been. This prince had the bravery of a soldier, and the virtues of a good citizen, but he had not the talents of a king. Bold in war, but unskilful in most of his negotiations, he thought that in a prince bravery and probity were the qualities most needed. "Cousin," he said to the Count of Flanders, after the victory of Cassel, "if you had governed more wisely I should not have had to spill so much blood to re-establish your authority. Remember in future that, if submission is the duty of the subject, that of the sovereign is justice."

III. 1. Give the plural and meaning of *mon genou*, *ce caillou bleu*, *ton bel œil*, *le chef-d'œuvre*, *le beau-fils*, *le tire-bouchon*, *c'est moi*, *il va.*

2. Give the feminine and meaning of *leur vieux grand-père*, *tous ces hommes*, *ce bon prince*, *son époux jaloux*, *quel beau garçon*, *eux-mêmes*, *le pêcheur*, *le pécheur.*

3. Form adverbs from *éloquent*, *lent*, *véhément*, *franc*, *naïf*, *constant*, *gentil*, *profond*, *dangereux*, *meilleur*, *pire.*

4. Exemply the use of the partitive article by turning into French :—some eggs, some wine, some water, some meat, good meat, fresh water, high houses, fine streets, red ink, small hands.

5. (*a*) Third singular and plural, present, past definite, past indefinite, and future of *devoir*, *savoir*, *appeler*, *venir*, *aller.*

(*b*) Second singular and plural pluperfect indicative of *se coucher*, first negatively, then interrogatively.

6. Give brief notices of any three of the following writers :—
Rousseau, Rabelais, Corneille, Béranger, Staël.

Tuesday, 4*th April*.—9 *to* 12 *o'clock.*

I. Translate into English :—

(*a*) Cette scène effrayante, et plus encore la crainte de la voir se renouveler, la tinrent longtemps éveillée. Cependant, lorsqu'elle reconnut à leur respiration bruyante que ses hôtes s'étaient endormis, elle se tranquillisa peu à peu, et, la fatigue l'emportant sur la frayeur, elle s'endormit elle-même profondément. Il était grand jour lorsque la vieille la réveilla. Elle descendit du poêle, et fut tout étonnée de lui trouver, ainsi qu'à son mari, un air plus naturel et plus affable. Elle voulait partir ; ils la retinrent pour lui donner à manger. La vieille en fit aussitôt les préparatifs avec beaucoup plus d'empressement que la veille. Elle prit la fourche et retira du poêle le pot de soupe, dont elle lui servit une bonne portion : pendant ce temps le mari soulevait une trappe du plancher, sous lequel était le seau du kvas, et lui en servit une pleine cruche.

(*b*) Sa complexion faible et délicate ne pouvait résister à tant de maux réunis : depuis quelque temps je m'apercevais que sa perte était inévitable, et tel était son triste sort que j'étais forcé de la désirer. En la voyant languir et se détruire chaque jour, j'observais avec une joie funeste s'approcher la fin de ses souffrances. Déjà depuis un mois sa faiblesse était augmentée ; de fréquents évanouissements menaçaient sa vie d'heure en heure. Un soir (c'était vers le commencement d'août) je la vis si abattue, que je ne voulais pas la quitter : elle était dans son fauteuil, ne pouvant plus supporter le lit depuis quelques jours. Je m'assis moi-même auprès d'elle, et dans l'obscurité la plus profonde nous eûmes ensemble notre dernier entretien. Mes larmes ne pouvaient se tarir : un cruel pressentiment m'agitait. "Pourquoi pleures-tu ? me disait-elle, pourquoi t'affliger ainsi ? Je ne te quitterai pas en mourant, et je serai présente dans tes angoisses." Quelques instants après elle me témoigna le désir d'être transportée hors de la tour, et de faire ses prières dans son bosquet de noisetiers : c'est là qu'elle passait la plus grande partie de la belle saison. Je la conduisis lentement jusque dans les noisetiers ; je lui formai un coussin avec des feuilles sèches qu'elle y avait rassemblées elle-même, et, l'ayant couverte d'un voile, afin de la préserver de l'humidité de la nuit je me plaçai auprès d'elle.

II. Translate into French :—

It is quite clear that French literature goes back (*remonter*) as far as the eleventh century. We have indeed only a very small number of fragments which we can assign by positive date to so distant a time, but if we study the literary monuments which belong with certainty to the twelfth century, we are led by all sorts of indications to recognise that even before the twelfth century there must have existed works in French. It is, therefore, about the year 1000 A.D., and shortly after the settlement (*éstablissement*) of the Capetians on the throne of France, that the French, giving up (say *renouncing to*) Latin, made attempts at literary composition in their own language. At this epoch neither Italian nor Spanish had any literature. What had been begun in the eleventh century became developed (say *developed itself*) in the twelfth—the golden age of French literature, if we consider the abundance of the works, the freshness of thought which inspire them, and the purity of language which they display.

III. 1. Give three French words ending in *ou* which add *x* for the plural, and three which add *s*; six words which do not change in the plural; six words in *al*, and six in *ail*, which take *aux* in plural; also three words in *al* which take *als* in plural. Give the meanings of the words.

2. Give the masculine form and the meaning of—*rieuse*, *sérieuse*, *pieuse*, *moqueuse*, *extérieure*, *douce*, *créée*, *dissoute*, *chétive*, *dinde*, *louve*, *jument*, *brebis*, *mule*.

3. (*a*) Give the feminine singular and the masculine and feminine plural of *celui*. (*b*) Give the various forms of the third personal pronoun, masculine and feminine, singular and plural, when used: (1) as subject; (2) as direct object of a verb (for example, *the man strikes him*); (3) as indirect object of a verb (for example, *the man gives him apples*); (4) after the preposition *pour*.

4. Write out the present, perfect definite (preterite) and future-perfect (future anterior) indicative of *se souvenir*, making the pronouns masculine throughout; and the pluperfect indicative and pluperfect subjunctive of the same verb, making the pronouns feminine throughout.

5. Give the French *words* for:—20, 20th, $\frac{1}{20}$, a score, 80, 90, 100, 101, 200, 207, 2235; 25th June 1892; at 3.25, at 7.15; half a franc, half of the pupils, the first soldier, the 21st soldier.

6. (*a*) Assign any *six* of the following writers to the centuries in which they lived, and mention one work of each, describing its nature in a few words:—La Fontaine, Froissart, J. J. Rousseau, Pascal, Joinville, Buffon, Montesquieu, Montaigne, Commines, La Bruyère, Descartes.

GERMAN.

Friday, 7th October 1892.—2 *to* 4 *o'clock.*

N.B.—*Candidates are reminded of the regulation that mere translation into English is not sufficient, but there must be translation of an English passage into each of the languages taken up.*

1. Translate into English:—

(*a*) Kaum hatte am andern Morgen der Kalif Chaſid gefrühſtückt und ſich angekleidet, als ſchon der Großvezier erſchien, um ihn, wie er befohlen,

zum Spaziergange abzuholen. Der Kalif ſteckte die Doſe mit dem Zauberpulver in den Gürtel, und nachdem er ſeinem Gefolge befohlen zurückzubleiben, machte er ſich mit dem Großvezier auf den Weg. Sie gingen zuerſt durch die weiten Gärten des Kalifen, ſpäheten aber vergebens nach etwas Lebendigem, um ihr Kunſtſtück zu probieren. Der Vezier ſchlug endlich vor, weiter hinaus an einen Teich zu gehen, wo er ſchon oft viele Tiere, namentlich Störche, geſehen, die durch ihr gravitätiſches Weſen und ihr Geklapper immer ſeine Aufmerkſamkeit erregt hätten. Der Kalif billigte den Vorſchlag ſeines Veziers und ging mit ihm dem Teiche zu. Als ſie dort angekommen waren, ſahen ſie einen Storch ernſthaft auf- und abgehen, Fröſche ſuchend und hie und da etwas vor ſich hinklappernd. Zugleich ſahen ſie auch weit oben in der Luft einen andern Storch dieſer Gegend zuſchweben.

(*b*) Nicht lange danach war wieder Not in allen Ecken, und die Kinder hörten, wie die Mutter des Nachts zum Vater ſprach: „Alles iſt wieder aufgezehrt, wir haben noch einen halben Laib Brot, hernach hat das Lied ein Ende. Die Kinder müſſen fort; was ſoll ſonſt im Winter aus uns werden? Wir wollen ſie tiefer in den Wald hinein führen, damit ſie den Weg nicht wieder heraus finden; dann ſind wir ſie ein für allemal los." Dem Manne wurde es ſchwer ums Herz. „Es wäre beſſer," meinte er „daß wir den letzten Biſſen mit den Kindern teilten." Aber die Frau hörte auf nichts, was er ſagte, ſondern machte ihm bittere Vorwürfe. Wer A ſagt, muß auch B ſagen; und weil er das erſte Mal nachgegeben hatte, ſo mußte er es auch zum zweiten Mal.

II. Translate into German :—

An old peasant became blind. As he was quite familiar (vertraut) with the streets of his village, he went about all day without a guide; and his only daughter kept house for him. One evening his daughter fell suddenly ill, and he was obliged to go and seek assistance. It was quite dark. What did he do under the circumstances? He took a lantern (Laterne, *f.*) with a burning candle, and left the house. In the street he met a friend who stopped (anhalten) him and said, "I have always thought you were a reasonable man, but I see now that you are getting childish; for why do you carry a lantern, since you cannot see?" "I am perhaps not quite so foolish as you think," answered the blind man; "I do not carry the light for myself, but for other people, in order that they should (say, can) see me and go out of my way."

III. (1) Give the nominative and genitive singular, and nominative plural—with the definite article—of the German for *any ten* of the following words:—*fish*, *bottle*, *battle*, *room*, *valley*, *mountain*, *hill*, *brook*, *river*, *wolf*, *fox*, *calf*, *nail*, *lead-pencil*, *state*.

(2) Decline, singular and plural, the German for—*that great man*, *a beautiful girl*, *good wine*, *thou poor boy*.

(3) Give the German words for—*Henry I.*, *George III.*, *Louis XVIII.*; $1\frac{1}{2}$, $\frac{2}{3}$; *at a quarter to one*; *on the 25th of March* 1857.

(4) Third singular and plural present, imperfect and perfect of bleiben, ſchneiden, ſprechen, liegen, rufen, ankommen, fortgehen, beſehen, vergeſſen, entnehmen.

(5) Write out the perfect indicative passive of ſehen, and the future perfect passive of loben.

(6) Write short notices of any three of the following writers:—Körner, Uhland, Lenau, Wieland, Herder.

Tuesday, 4*th April* 1893.—1.30 *to* 4.30 *o'clock*.

I. Translate into English:—

(*a*) In den erſten Tagen bemerkten ſie große Unruhe und Trauer in den Straßen; aber ungefähr am vierten Tage nach ihrer Verzauberung ſaßen ſie auf dem Palaſt des Kalifen, da ſahen ſie unten auf der Straße einen prächtigen Aufzug, Trommeln und Trompeten ertönten; ein Mann in einem goldgeſtickten Scharlachmantel ſaß auf einem geſchmückten Pferde, umgeben von glänzenden Dienern; halb Bagdad lief ihm nach und alle ſchrieen: „Heil Mirza, dem Herrſcher von Bagdad!" Da ſahen die beiden Störche auf dem Dache des Palaſtes einander an, und der Kalif Chaſid ſprach: „Ahnſt du jetzt warum ich verzaubert bin, Großvezier? Dieſer Mirza iſt der Sohn meines Todfeindes, des mächtigen Zauberers Kaſchnur, der mir in einer böſen Stunde Rache ſchwur. Aber noch gebe ich die Hoffnung nicht auf. Komm mit mir, du treuer Gefährte meines Elends; wir wollen zum Grabe des Propheten wandern, vielleicht wird an heiliger Stätte der Zauber gelöſt."

(*b*) Vor einem großen Walde wohnte ein armer Holzhacker mit ſeiner Frau und ſeinen zwei Kindern; das Bübchen hieß Hänſel und das Mädchen Gretel. Er hatte wenig zu beißen und zu brechen, und einmal, als große Teurung ins Land kam, ſtieg die Not aufs höchſte. Wie er ſich nun abends im Bett herumwälzte und vor Sorgen nicht einſchlafen konnte, ſeufzte er und ſprach zu ſeiner Frau: „Was ſoll aus uns werden? wie können wir unſere armen Kinder ernähren, da wir für uns ſelbſt nichts mehr haben?" —„Ja," antwortete die Frau, „da iſt guter Rat teuer. Wir haben kein Brot im Hauſe und können keins ſchaffen. Hätten wir die Kinder nicht, ſo ſchlügen wir uns wohl durch. Weißt du was, Mann, wir wollen ſie morgen in aller Frühe in den Wald führen, wo er am dickſten iſt; dort machen wir ihnen ein Feuer an und geben jedem noch ein Stückchen Brot; dann gehen wir an unſere Arbeit und laſſen ſie allein. Sie finden den Weg nicht wieder nach Hauſe, und wir ſind ſie los."

II. Translate into German:—

A miller possessed an ass which had served him faithfully for many years, but his strength was now nearly exhausted (erſchöpfen), and he was gradually becoming unfit (unfähig) for work. Then his master began to think that he must get quit of him, but the ass saw that no good wind was blowing (wehen), and said "I will go at once to Bremen; there I may become town-musician." When he had gone a mile or two, he met an old dog who looked (ausſehen) very tired. "What is the matter with you?" enquired the ass. "Ah!" said the dog, "because I am old, and growing every day weaker, my master wanted to kill me, and I have run away, but how I shall earn my bread I don't know." Well," said the ass, "I am going to Bremen to become town-musician there; come with me and help me, I will blow the horn and you will beat the drum." The dog was quite glad, and the two friends went on together.

III. 1. (*a*) In the phrase „das Bübchen hieß Hänſel"—express the same idea in two other ways. (*b*) „Hätten wir die Kinder nicht"—express this idea with the help of the conjunction which is implied. (*c*) In the phrase „ſo ſchlügen wir uns durch"—why does the subject come after the predicate? (*d*) Express „Wir ſchlügen uns durch" in the above passage by another tense-form of the same verb. (*e*) Distinguish between noch ein Stückchen Brot and ein anderes Stückchen Brot. (*f*) Distinguish between etwas ſcharf and etwas Scharfes. (*g*) Distinguish between fallen and fällen; hangen and hängen; wir gaben and wir gäben; wir beten, wir bieten and wir bitten.

2. Give the nominative and genitive singular and the nominative plural—with the definite article—of the German for *any ten* of the following words:—*rock, bird, egg, nest, tree, branch, root, axe, gift, bear, nut, carriage, shoe, chair, cabbage.*

3. Give the third person singular and the third person plural of the present, imperfect and perfect of:—faſſen, bergen, beißen, erſchrecken, eſſen, begleiten, legen, ſegnen, leſen, fahren.

4. Write out the whole of the present and imperfect indicative of mögen, dürfen, and wollen.

5. (*a*) Decline, singular and plural, the German for—*a wise king, this little house, white paper.* (*b*) Write out all the personal pronouns in German, singular and plural, in all their cases.

6. State what you know of *any four* of the following writers, and name two works of each of those that you select:—Goethe, Leſſing, Bürger, Heine, Schiller, Richter.

FIRST PROFESSIONAL EXAMINATION.

CHEMISTRY.

Monday, 25th July 1892.—10 *to* 12 *o'clock.*

1. Solution of Iodide of Potassium is added to each of the following solutions, until no further change occurs. State what you would notice, and give an equation for the change in each case,

(1) Solution of Lead Nitrate.
(2) Solution of Cupric Chloride.
(3) Solution of Mercuric Chloride.
(4) Solution of Silver Nitrate.
(5) Solution of Bismuth Nitrate.

2. What products are formed when the following substances are heated :—(1) Red Lead ; (2) Calcium Acetate (3) Zinc Sulphate ; (4) Orthophosphoric Acid ; (5) Sodium Nitrate?

3. What products are formed when Chlorine acts on the following substances :—(1) Gold ; (2) Ethylene ; (3) Iron ; (4) Phosphorus ; (5) Sulphuretted Hydrogen ; (6) Ammonia solution?

4. What are the principal constituents of Coal Gas? Which of them are poisonous? Which of them are the most valuable as illuminants?

5. How would you prepare Ethylene?

What would be the weight of the products of the complete combustion of 500 grammes of Ethylene, and what would be the volume in *Litres*, of the gaseous products, measured at 10° C. and 740 mm.

($H = 1$, $C = 12$, $O = 16$. 2 grammes of Hydrogen occupy at 0° C, and 760 mm., 22.33 Litres.)

Monday, 20th March 1893.—10 *to* 12 *o'clock.*

1. What is the action of strong sulphuric acid on—(*a*) Copper ; (*b*) Zinc ; (*c*) Potassium iodide ; (*d*) Charcoal ; (*e*) Potassium chlorate ; (*f*) Potassium chromate?

2. What reaction occurs when an aqueous solution containing iodine and potassium iodide is added to dilute solution of—(*a*) Sulphurous acid ; (*b*) Sulphuretted hydrogen ; (*c*) Phosphorous acid ; (*d*) Sodium thiosulphate ; (*e*) Chlorine?

3. What happens when ammonium sulphide is added to each of the following solutions until no further change is produced :—(*a*) Lead chloride ; (*b*) Aluminium sulphate ; (*c*) Antimonious chloride ; (*d*) Ferrous sulphate ; (*e*) Hydrochloric acid ; (*f*) Magnesium sulphate?

4. Describe and explain the preparation of soap.

What is the chemical constitution of soap?

What happens when a solution of soap is mixed with—(*a*) Dilute sulphuric acid ; (*b*) Solution of calcium sulphate ; (*c*) Strong solution of common salt?

5. Hydrochloric Acid is diluted with water until 100 cubic centimetres of the dilute solution exactly precipitate 0·34 gramme of silver nitrate : how many cubic centimetres of this dilute hydrochloric acid are required exactly to neutralise 0·68 gramme of ammonia?

$H = 1$; $N = 14$; $O = 16$; $Cl = 35·5$; $Ag = 108$.

BOTANY.

Monday, 25*th July* 1892.—1 *to* 3 *o'clock.*

1. Describe the structure of a typical living plant-cell.

2. Write an account of the life-history of *Funaria.*

3. What is meant by transpiration in plants? Why do plants transpire? Point out how (*a*) internal and (*b*) external conditions affect the process of transpiration in a plant.

4. What is the structure of an ovule in *Scilla* at the period when impregnation of the ovum takes place? Compare it with that of the homologous part in *Aspidium.*

5. Describe the structure of the leaf in *Ulmus.* Point out the function of the parts you describe.

Monday, 20*th March* 1893.—1 *to* 3 *o'clock.*

1. Write a short account of the life-history of *Mucor*, and compare it with that of *Eurotium.*

2. Enumerate the chief food-elements of plants, and describe the forms in which they are commonly absorbed.

3. Describe some of the principal modifications of the stem met with in plants. Point out the purpose of the modifications you describe.

4. Describe, under the headings (*a*) chemical effects and (*b*) mechanical effects, the influence exercised by light upon plants.

5. Give an account of and compare the construction of the inflorescence and flowers in Compositæ and Umbelliferæ. Point out the advantages to the plants derived from the constructions you describe.

ZOOLOGY.

Tuesday, 26*th July* 1892.—10 *to* 12 *o'clock.*

A

1. Describe the branchial apparatus of a fish under the following heads:—(1) Skeleton; (2) Lamellae; (3) Vessels; (4) Nerves. What becomes of the branchial apparatus in the higher vertebrates?

2. What do you understand by Heredity and Variation? Illustrate your answer by referring to the Bird Group, and to the limbs and horns of Selenodont Ungulates.

B

(*Two only of the following Questions to be answered.*)

3. Describe the eye of the Frog or Pigeon, and compare it, as regards structure and mode of action, with that of the Lobster and that of the Snail.

4. Refer five of the following animals to their proper Zoological positions, mention their habitats, and give your reasons in each case for placing them in the particular groups:—*Gregarina*, *Distoma*, *Ascaris*, *Anodon*, *Nephrops*, *Phallusia*, *Myxine*, *Didelphys*, *Bradypus*, *Mycetes*, *Pteropus*, and *Balæna*.

5. What do you understand by the respiratory function of the blood? Describe the circulatory apparatus in Arenicola, Nephrops, and Blatta.

Tuesday, 21*st March* 1893.—10 *to* 12 *o'clock*.

(*Four, and only four, Questions to be answered.*)

1. In what respects do the structure and life-history of a typical Infusorian, such as Paramœcium, differ from those of the Metazoa? Describe the process of conjugation in Paramœcium.

2. Describe briefly (*a*) the development of the Heart and aortic arches in any Vertebrate, and (*b*) the formation of the Allantois and Placenta in the Rabbit.

3. Refer the following animals to their orders, giving your reasons, and indicate their geographical distribution: — *Ornithorhynchus*, *Macropus*, *Balæna*, *Simia*.

4. Contrast the nephridia, reproductive, and respiratory organs in Arenicola, Nephrops or Astacus, Helix and Raia.

5. What do you understand by Variation and Heredity? Illustrate your answer by referring to members of the Cetacea Group.

PHYSICS.

Tuesday, 26*th July* 1892.—1 *to* 3 *o'clock*.

(*Only five Questions are to be answered.*)

1. Distinguish between the Mass, and the Weight, of a body:—and explain fully how Newton proved that, in any one locality, the weights of bodies are proportional to their masses.

2. Define the compressibility of a liquid, and show how it is experimentally determined. How does the compressibility of water depend upon its temperature?

3. State the conditions for equilibrium, and for stable equilibrium, of a floating solid. Take the case of an egg-shell, partly filled with water, and floating on water.

4. State Hooke's Law, and give illustrations of it. Point out how we connect it with the fact that the pitch of the note given by a tuning-fork does not vary with its intensity.

5. What is meant by the term Latent Heat? How can the latent heat of steam be found experimentally? How is it that certain liquids can, by condensation of steam, be raised to a higher temperature than that of the steam?

6. Give reasons for regarding Light and Radiant Heat as mere varieties of one phenomenon.

7. State the law of refraction of light at the bounding surface between air and water:—and show how it accounts for the facts, that we underestimate the depth of clear water, and the more so the more obliquely we look into it.

8. State the fundamental facts of Thermo-electricity and of Electro-magnetism:—and show how they are applied to the measurement of very small changes of temperature.

Tuesday, 21*st March* 1893.—1 *to* 3 *o'clock.*

(*Not more than Five Questions in all to be answered.*)

1. Explain the production of the colours in
   (*a*) Mother of Pearl.
   (*b*) Soap-bubbles.
   (*c*) Rainbows.
   (*d*) Aurorae.

2. Point out how Newton's Laws of Motion led directly to the fundamental principles of Statics and of Hydrostatics.

3. State some of the more important effects which are due to the large specific heat of water, or to the great latent heat of water or of steam.

4. What are the causes which can alter (*a*) the length of the day, (*b*) the position of the pole-star with reference to the earth's axis?

5. Describe some of the proofs that there is surface-tension in liquids.

6. Distinguish among the Intensity, Pitch, and Quality of a musical note; pointing out the physical nature of each.

7. Specify three different classes of sources of current electricity, and point out in each how the energy is supplied.

8. Describe the fundamental experiment in Electro-magnetism, and show how it enables us to measure electric currents.

[*Any of the following Questions may be substituted for an equal number of the preceding by those Candidates who were permitted to take their course of Physics in the Class of Natural Philosophy* 1892-3.]

i. State the laws of the flow of liquids through very fine tubes; giving a sketch of the physical explanation.

ii. Show how to find the greatest internal pressure which a spherical boiler can withstand, in terms of its radius and the tensile strength of the material.

iii. Show how the magnifying power of a single lens depends on its focal length.

iv. State the relation among the pressure, volume, and temperature of a given mass of air. If the pressure be doubled, and the temperature be raised from 0° to 100° C, in what ratio will the volume be altered?

SECOND PROFESSIONAL EXAMINATION.

ANATOMY.

Monday, 18*th July* 1892.—10 *to* 12 *o'clock.*

1. Name the arteries which are distributed to the borders and surfaces of the Scapula. What is their origin, their distribution, and their anastomoses?

2. Give the characters which distinguish the right from the left lung. Describe and contrast the microscopic structure of a small bronchus, and the wall of an air-cell.

3. Give, step by step, the dissection required to expose in the gluteal region the gluteal artery and its branches. Name the muscles supplied by the superior gluteal nerve.

4. Name the nerves which supply:—
   (*a*) The skin of the scalp and face.
   (*b*) The muscles of the same regions.

State the origin of these nerves. Give the areas of cutaneous distribution and the groups of muscles supplied by the nerves included in the divisions (*a*) and (*b*) respectively.

Monday, 27*th March* 1893.—10 *to* 12 *o'clock.*

1. Define the term "Mediastinum" as applied to the anatomy of the thoracic cavity, and state the relative position of the objects contained in the *posterior* mediastinum.

2. To what anatomical passage is the term "crural canal" applied? How is it formed? What are its contents and immediate relations?

3. Describe the general appearance of a transverse section through the Spinal Cord. State the relative quantity of grey and white matter in the cervical, dorsal, and lumbar parts of the cord. Give the arrangement and characters of the nerve-cells in the lower dorsal region.

4. Describe, step by step, the dissection necessary to expose in the Perineum the whole of the anterior surface of the triangular ligament of the Urethra.

INSTITUTES OF MEDICINE.

Monday, 18*th July* 1892.—1 *to* 3 *o'clock.*

1. State (*a*) what substances are absorbed in the Small Intestine; (*b*) the channels by which they are absorbed and the agents concerned in the process; (*c*) the immediate and subsequent changes which such absorbed substances undergo in the economy; (*d*) the forms in which they finally appear in the excreta.

2. Describe the position of the Respiratory Centre, and the manner in which it is affected by various states of the nervous system and of the blood.

3. Describe the minute structure of a spinal nerve and of the ganglion on its root; the precise connection between the ganglion and the nerve-fibres; and the experiments that have thrown light on the function of the ganglion.

Monday, 27th March 1893.— 1 *to* 3 *o'clock.*

1. Give an account of (*a*) the method by which the amount of heat discharged by an animal may be estimated; (*b*) the diurnal variations of the temperature of the human body, and their causes; (*c*) the means by which the temperature of the body is regulated.

2. Give an account of Hæmoglobin and its compounds, and of Hæmatin, Hæmin, and Hæmatoidin.

3. (*a*) Describe the minute structure of the Retina, and the peculiarities of its structure at the Macula Lutea. (*b*) State the chemical and physical (including morphological) changes that are known to be produced in the Retina by the influence of light.

MATERIA MEDICA.

Tuesday, 19th July 1892.—10 *to* 12 *o'clock.*

1. Explain the escharotic effects of *Sulphuric Acid*, *Caustic Potash*, *Arsenious Acid*, and *Nitrate of Silver*.

2. What is *Ergot?* Mention its physical and sensible properties, and its officinal preparations and their doses. Describe its pharmacological action and therapeutical applications.

3. Describe the pharmacological action and therapeutical applications of *Oil of Turpentine*.

4. Define *enemata*. Explain why they vary in bulk, and illustrate your answer by examples of officinal enemata.

5. Describe briefly the preparation of *Koumiss*. How does its composition differ from that of milk? What are its therapeutic uses?

Tuesday, 28th March 1893.—10 *to* 12 *o'clock.*

1. What are the leading actions of *Sulphur?* What chemical form, does it assume in the body? Mention its doses and officinal preparations.

2. Describe the pharmacological action and the therapeutical uses of *Nitro-glycerine*. In what forms and doses is it used?

3. Compare the action of *Cascara Sagrada* with that of *Colocynth*. State how and for what exact object Cascara should be used, and in what doses of the liquid extract?

4. Define *Thymol*. Describe its pharmacological action.

5. What are *Suppositories?* Mention four that are officinal, each with a different active ingredient, and state the active ingredient and the therapeutic uses of each of those mentioned.

GENERAL PATHOLOGY.

Tuesday, 19*th July* 1892.—1 *to* 3 *o'clock.*

1. Describe the various forms of degeneration which may affect the secreting cells of a gland, giving an example of each.

2. Describe the modes of formation of cavities in the lung in phthisis. Mention their chief characters and sites.

3. What are the most frequent positions of cerebral embolism? Describe the changes in the central nervous system which may result from it.

Tuesday, 28*th March* 1893.—1 *to* 3 *o'clock.*

1. *Waxy Degeneration.*—Give an account of its causes, the common sites in organs and tissues, the character of the changes produced, and their mode of recognition. Describe fully waxy degeneration of the Spleen.

2. *Tetanus, Leprosy, and Relapsing Fever.*—What is known of the micro-organisms of these diseases?

3. *Endocarditis of the Aortic Valve.*—Describe the changes produced in the aortic valve by the various forms of Endocarditis. What changes in the heart may result from these?

FINAL PROFESSIONAL EXAMINATION.

SURGERY.

Tuesday, 14*th June* 1892—10 *to* 12 *o'clock.*

(*Only three Questions to be answered.*)

1. Mention the various injuries which cause (*a*) Shortening, (*b*) Lengthening of the *upper arm*. Give the distinctive features in each injury.

2. Give the causes and symptoms of *Pus in the Pleural Cavity* (Empyema). Describe the treatment. In what circumstances would you recommend excision of portions of several ribs?

3. What symptoms would indicate the necessity for opening the *mastoid antrum?* Describe the operation and after-treatment.

4. You are called to two cases of urinary retention. Case *A* due to *enlarged prostate;* Case *B* due to *organic stricture.* In both you fail to give relief with the catheter. What treatment would you adopt?

MIDWIFERY.

Tuesday, 14*th June* 1892—1 *to* 3 *o'clock.*

(*All three Questions to be answered.*)

I.—BACKWARD DISPLACEMENT OF THE GRAVID UTERUS.

1. Explain the Varieties. 2. State the possible Causes. 3. De-

scribe the Symptoms and Physical Diagnosis. 4. Give the Prognosis. 5. Give the Treatment.

II.—RUPTURE OF THE PARTURIENT UTERUS.

1. How may it be produced? 2. In what Situations may it occur? 3. What Results may follow? 4. Give the Symptoms and Diagnosis—(1) Of Imminent; (2) Of Actual Rupture. 5. Give the Treatment—(1) Prophylactic; (2) Active.

III.—FIBROID TUMOURS OF THE UTERUS.

1. Describe their Structure. 2. Explain their Anatomical Seats. 3. Give the Symptoms and Diagnosis of an Interstitial Fibroid in a Uterus the size of a five months Gravid Organ. 4. What Treatment would you recommend in such a case?

PRACTICE OF PHYSIC.

Monday, 13*th June* 1892.—10 *to* 12 *o'clock.*

(*Only three Questions to be answered.*)

1. Describe, in detail, all the circumstances which would enable you to diagnose a Syphilitic Gummatous Tumour, of the size of a pigeon's egg, situated in the Cortex Cerebri, about the middle of the Rolandic region.

2. Give (*a*) the Morbid Anatomy, (*b*) the Clinical History, (*c*) the Etiology, and (*d*) the Treatment of a case of Diphtheria.

3. State the current views as to the relationship of Micro-organisms to Lobar Pneumonia. Describe the physical signs of that disease in the stage of consolidation, and indicate the principles that would guide you in its treatment.

4. Give the Causes, Morbid Anatomy, and Symptoms of Cirrhosis of the Kidneys, with the grounds of differential diagnosis between it and the other forms of Bright's Disease.

MEDICAL JURISPRUDENCE.

Monday, 13*th June* 1892.—1 *to* 3 *o'clock.*

I.—*Injury of Abdomen.*

A man is alleged to have been kicked on the abdomen. He dies after a short illness. On dissection, rupture of the intestine is found.

1. In defence, it is maintained that there was no kick, because there was no external mark.

How would you answer this objection?

2. It is stated in defence that the rupture was from disease, not from violence at all.

What appearances would you look for in order to settle this?

II.—*Salt of Sorrel.*

1. What is Salt of Sorrel chemically?

2. What may be a fatal dose?

3. What symptoms does it produce?
4. How soon may it prove fatal?
5. How would you treat a case of poisoning with this salt?

III.—*Rape.*

What are the appearances which show that this crime has been perpetrated?

(*a*) On a virgin adult.

(*b*) On a child of (say) ten years.

(*c*) Under what circumstances may infantile vaginal discharge arise, so as to give rise to unfounded suspicion of rape or lewd practices?

PUBLIC HEALTH.

Monday, 13*th June* 1892.—1 *to* 3 *o'clock.*

I.—*Duration of Infection.*

1. At what period would you certify that a child, a member of an invaded household, might safely return to school?

(*a*) After exposure to infection from

1. Small-pox.
2. Chicken-pox.
3. Scarlatina.
4. Diphtheria.
5. Measles.
6. Rötheln.
7. Whooping-cough.
8. Mumps.

State briefly your reasons in each case, naming the diseases in the order in which they are given.

(*b*) After an attack of

1. Small-pox.
2. Chicken-pox.
3. Scarlatina.
4. Diphtheria.
5. Measles.
6. Rötheln.
7. Whooping-cough.
8. Mumps.

II.—*Epidemic Enteric Fever.*

In a town of 50,000 inhabitants, having a public water supply on the intermittent plan and a single system of sewerage, outbreaks of enteric fever occur in the autumn of two different years. In both outbreaks fifty houses are invaded within a fortnight of the first discovered appearance of the disease; but in the one instance the fifty invaded houses are evenly distributed throughout the town, whilst, in the other instance, they are confined to a limited and well-defined area.

(*a*) State the probable agency of infection dissemination in each case.

(*b*) State briefly the steps you would take to ascertain the correctness of your inferences.

(*c*) What precautions would you advise to be taken in the one and the other outbreak?

1. To limit the spread of the disease.
2. To prevent its recurrence.

CLINICAL MEDICINE.

Examinations written, oral, and practical, on cases in wards of the Royal Infirmary.

CLINICAL SURGERY.

Examinations on the Symptoms, Diagnosis, and Treatment of Surgical Cases in the wards of the Royal Infirmary.

PRESCRIPTION WRITING.

Tuesday, 14*th June* 1892—3.30 *o'clock*.

⁂ *Each prescription to be written in Latin without any contractions, except the directions for the patient, which may be written in English.*

Three Prescriptions were given.

Fellowships, Scholarships, Bursaries, and Prizes in Medicine.

I.—FELLOWSHIPS.

I.—THE SYME SURGICAL FELLOWSHIP.

This Fellowship, of the annual value of £105, 17s. 6d., and tenable for two years, is open to competition among Bachelors of Medicine and Masters in Surgery of not more than three years' standing, who shall, in the opinion of the Examiners, have passed a creditable examination for these degrees, and who shall present the best Thesis on a Surgical subject giving evidence of original research, or practical talent, whether such Thesis be given in for Graduation or otherwise. The next award may be at the Graduation Ceremonial in August 1893. *See* Deed of Foundation, at p. 310 of CALENDAR for 1872-73.

1889. Alex. Edington, M.B., C.M. | 1891. *Alexander Miles, M.D.*

II.—THE LECKIE-MACTIER FELLOWSHIP.

The Leckie-Mactier Fellowship, of the annual value of £70, is awarded to Bachelors of Medicine of not more than three years' standing, and is tenable for three years. The examinations comprise written reports and commentaries on medical, surgical, and gynecological cases in the University Wards in the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also oral examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Every holder of the Fellowship must, before the expiry of his tenure, transmit to, and if required read publicly in presence of the Medical Faculty, a communication embodying the result of original observation or historical research in some department of medicine. Next appointment may be made in November 1895. *See* Deed of Foundation at p. 365 of CALENDAR for 1880-81.

1889. Thos. W. Eden, M.B., C.M.
1892. *Carstairs Cumming Douglas, M.B., C.M., B.Sc.*

III.—THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship—candidates for which must have taken the Degree of Doctor of Medicine at the University of Edinburgh—is in the patronage of the Trustees of the British Museum, and is of the annual value of £144. The office is tenable for five years, at the expiration of which period the Lecturer is ineligible for the next election. The number of lectures is not to be less than twelve in each year, nor more than three in the same week. The course is required to be annually delivered between the first of November and the end of July following, at such public places in the United Kingdom as the Trustees shall approve. The public are admitted without fee. The Lecturer is required at the termination of each course to deposit a copy, or full extract of such course of lectures, with the Principal Librarian of the British Museum, to whom application may be made for further particulars.

IV.—FREELAND BARBOUR FELLOWSHIP.

This Fellowship is of the value of £100, and is open to award, in each alternate year, to the Bachelor of Medicine and Master in Surgery who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the Professional Examinations, and who is prepared to devote not less than one year to original research in Midwifery or diseases of women, in any of the Laboratories or Practical Departments of the University of Edinburgh. The next award will be made in July 1894. (*See* Deed of Foundation at page 517 of CALENDAR for 1889-90.)

1888. John David Williams, M.B., C.M.
1890. R. M. Home, M.B., C.M. (resigned).
,, Gerald Fitzgerald, M.B., C.M.
1892. *George Home, M.B., C.M.*

THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see page 280.

II.—SCHOLARSHIPS.

I.—ETTLES SCHOLARSHIP IN MEDICINE.

This Scholarship was founded in 1868 by Miss Mary Ettles of Inverness, and is of the annual value of about £25. It is awarded annually to the Bachelor of Medicine and Master in Surgery of the University of Edinburgh, whom the Faculty of Medicine may consider the most distinguished of that year. (*See* Deed of Foundation, at page 242 of CALENDAR for 1868-69.)

1888. T. W. Eden, M.B., C.M.
1889. E. G. Pilgrim, M.B., C.M.
1890. Carstairs C. Douglas, M.B., C.M.
1891. Harry Rainy, (M.A.), M.B., C.M.
1892. *Robert Murray Leslie (M.A., B.Sc.), M.B., C.M.*

II.—SIBBALD MEDICAL SCHOLARSHIP.

This Scholarship is of the annual value of £40. *First*, The Scholarship shall be bestowed on, and held by, a Student in the Faculty of Medicine in the University of Edinburgh, *who does not hold any other Scholarship or Bursary*, and shall be tenable for three years, during which period the Scholar shall complete the prescribed course of medical study required from Candidates for the degree of Bachelor of Medicine. *Second*, The Scholarship shall be bestowed upon the Student obtaining the highest place by Competitive Examination, and shall be open to all Candidates who have not previously been Students of Medicine in any other School or University, and who have attended Medical Classes in the University of Edinburgh, for *not less* than one Winter and one Summer Session, and for *not more* than one Winter and two Summer Sessions. The Competitive Examination shall be in Chemistry, Botany, and Natural History, and shall be conducted in such manner as the Senatus Academicus shall, in concurrence with the Trustees, prescribe. The next competition may take place in October 1894. Application to be made to Messrs MACKENZIE, INNES, & LOGAN, W.S., 23 Queen Street, Edinburgh.

1889. Robert Hutchison
1891. *James R. Watson*

III.—THOMSON SCHOLARSHIP.

The Thomson Scholarship, value £40, tenable for four years, open to matriculated students commencing their first Winter Session in

Medicine. The examination is on Botany, Zoology, and Elementary Mechanics. The Scholarship is awarded to the candidate who shall obtain the highest number of marks in the examination. The Trustees, however, reserve power to themselves to withhold the appointment should none of the candidates obtain a sufficiently high percentage of the marks in the examination. Candidates must send in their names to the agents for the Trust before the first day of October in the year in which there is a competition for the Scholarship. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. Candidates claiming such preference must intimate their names to the Agents for the Trust at least one clear week before the examination. The next appointment may be made in October 1894. For other particulars, application to be made to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, Edinburgh, the Agents for the Trustees.

1890. *J. Stewart Norwell, B.Sc.*

IV.—COLDSTREAM MEMORIAL MEDICAL MISSIONARY SCHOLARSHIP.

The Coldstream Memorial Medical Missionary Scholarship was founded in memory of the deceased John Coldstream, M.D., F.R.C.P.E. Value £25, tenable for four years. The holder must be a first year's Medical Student, who intends to devote himself to the life of a Medical Missionary at home or abroad. He must be approved of by the awarders, and pass the preliminary examination before beginning his studies. Next award in 1895. A preference is given to students connected with the Edinburgh Medical Missionary Society. A full copy of the conditions can be had on applying to John P. Coldstream, W.S., 6 Buckingham Terrace, Edinburgh. *See* Conditions in CALENDAR for 1879-80, p. 357.

1891. *James Hunter White.*

V.-XII.—VANS DUNLOP SCHOLARSHIPS.

Eight Scholarships, of £100 each, tenable for three years. Not more than one at a time can be held by the same person. *See* Excerpt from Will of Dr Vans Dunlop, p. 380 of CALENDAR for 1880-81.

V. *One* is awarded to the Candidate who, at either the March or the preceding October Medical Preliminary Examination, has obtained the highest number of marks in the Subjects required to enable him to appear for a Professional Examination, provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. The next award may be made in March 1896.

1890. William Anderson Stephen.

W. D. Adams gained the first place in the Examination, but was disqualified by the then existing regulations.

1893. *A. C. M'Gilchrist.*

VI. One is awarded for subjects of first year's study, viz., Botany, Zoology, Chemistry, and Anatomy, to the Student who, having attended, for the first time, a systematic course of Lectures on each of the above Subjects during the preceding Winter Session, and also during either the preceding or current Summer Session, obtains the highest number of marks collectively in the University Class Examinations in those Subjects; provided that he has gained not less than 60 per cent. of the marks in each of all the Subjects. The successful Candidate shall continue his medical studies in this University during his tenure of the Scholarship. The next award may be at the end of July 1893.

1890. *J. P. Stewart.*

VII. One is awarded for subjects of second year's study, viz., Physiology and Surgery, to the Student who, during the Winter Session, shall have attended, for the first time, a systematic course of Lectures on each of these Subjects, and who shall have obtained the highest collective number of marks in the Class Examinations; provided that he has gained not less than 60 per cent. of the marks in each of the two subjects. The successful Candidate shall continue his medical studies in the University during at least two years of his tenure of the Scholarship, whilst the remaining year must be passed in study, either in this University, or in some other School of Medicine to be approved by the Faculty of Medicine. The next award may be at the end of March 1896.

1890. Louis Godfrey Irvine | 1893. *Daniel Brough*

VIII.-X. Three Scholarships, of which one is awarded annually at the end of the third Winter of Medical Study to the Student who, after having attended within the University the Subjects of Examination, shall obtain the highest number of marks in an Examination, specially conducted for the purpose, on Anatomy, Physiology, Materia Medica, and Pathology. The successful Candidate is required to continue his studies in this University, for at least the first year of his tenure of these Scholarships, and during the remaining period to prosecute research in some branch of study comprised in the Medical curriculum. The award is made annually in April.

1889. Robert Main Horne
1890. E. Fuller
1891. Robert Hutchison
1892. R. W. Briggs
1893. *Joseph Edward Bowes*

XI. One in Chemistry and Chemical Pharmacy.

(1.) The Subjects of Examination are—

(*a*) Inorganic and Organic Chemistry, and the connection between the Chemical and Physical character of Substances.

(*b*) Qualitative and Simple Quantitative Analysis of Inorganic Substances, and the Preparation and Testing of the Chemical Substances in the British Pharmacopœia.

(2.) The Examination in subjects (*a*) is similar, and held at the same time, as that for the Second B.Sc. Examination. The Examination in subjects (*b*) is conducted practically in the Laboratory.

(3.) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance, and will take place in April 1894.

1888. Francis Maitland Gibson and Hugh Marshall—equal.
1891. *William Cossar Mackenzie, D.Sc.*

XII. One in Natural History, including Geology and Botany.

(1.) The subjects Natural History, Geology, and Botany are coequal in the Examination, and the Examination in each of the three subjects is similar to that for the Second B.Sc. Examination, and consists of two parts—a Written Examination extending over not less than three hours, and a Practical Examination with specimens.

(2.) The next Examination will be held in April 1895, at the same time as the Second B.Sc. Examination.

(3.) The Competition shall be open to all Students of the University, from the second to the sixth year (inclusive) of their attendance.

1889. J. Graham Kerr.
1892. *J. D. F. Gilchrist, B.Sc.*

XIII.—THE MURCHISON MEMORIAL SCHOLARSHIP.

This Scholarship consists of the annual proceeds of about £1000 awarded in alternate years in London and Edinburgh, for proficiency in Clinical Medicine. Candidates must be registered medical students who have attended for not less than four nor more than six years at Hospitals and Classes at Edinburgh or London, recognised by the University of Edinburgh, or the Royal College of Physicians of London. The competition in 1893 will be held in Edinburgh; and that in 1894 will be held in London.

1888. H. T. Tylden, M.A., M.B.
1889. Arthur J. Whiting, M.B., C.M.
1890. Bedford Pierce, M.B.
1891. No award.
1892. No award.

XIV.—THE STARK SCHOLARSHIP IN CLINICAL MEDICINE.

This Scholarship of £112, is tenable for one year, and is for the encouragement of the study of Clinical Medicine. It is open to competition among all matriculated students of the University who are or have been in attendance at the University Class of Clinical Medicine, and to Bachelors of Medicine of the University of not more than eighteen months' standing who have attended this class. It is open to competition every second year alternately with the competition in Edinburgh for the Murchison Memorial Scholarship. The Examination, oral and in writing, shall include (*a*) Examination of Patients; (*b*) Questions on Therapeutics and Pathology; (*c*) Examination of Specimens. Each holder of the Scholarship shall be required to devote his time in the wards of the Professors of Clinical Medicine to original investigation or other work directly connected with Clinical Medicine; to report his proceedings every three months to the Professors of Clinical Medicine; and, within a reasonable time after the expiry of his tenure of the Scholarship, to present to the Faculty of Medicine a written statement of the results of his investigations or other work. This Scholarship cannot be held along with any other Fellowship, Scholarship, or Bursary in a Scottish University. The next Competition will take place in July 1894. *See* Deed of Foundation at p. 427 of CALENDAR for 1884-5.

1888. Jas. Brown Bird, M.B., C.M.
1890. R. D. Clarkson, B.Sc., M.B., C.M.
1892. *Robert Murray Leslie* (*M.A.*, *B.Sc.*), *M.B.*, *C.M.*

XV.—BUCHANAN SCHOLARSHIP.

This Scholarship consists of the proceeds of £1000, given by Mrs James Buchanan, who endowed the Buchanan Medical Ward in the Royal Infirmary. The Scholar acts as House Physician to the University Gynecological Ward as one of the conditions of tenure of the Scholarship, and also gives assistance in the Examination of Class Exercises. The Scholarship is awarded annually to the Graduate in Medicine who shows the highest proficiency in Midwifery and Gynecology.

1888. W. Fordyce, M.A., M.B., C.M.
1889. G. Wilkinson, M.B., C.M.
1890. C. C. Douglas, M.B., C.M.
1891. William M. Cairns, M.B., C.M.
1892. *John Lawson Dick*, *M.B.*, *C.M.*

XVI.—THE JAMES SCOTT SCHOLARSHIP.

This Scholarship, founded by Mrs Mary Ann Scott or Thomson of Hawick, of the value of £45, is awarded annually at the Graduation Ceremonial in Medicine in August for proficiency in Midwifery. The award is based upon the results of the Competitive Examinations in the Class of Midwifery, upon the character of the records of Cases of Midwifery attended by the Candidate at the Royal Maternity and Simpson Memorial Hospital, and upon the position obtained by him at the Final Examination for Degrees in Medicine. The Scholarship is for one year, but may, in special circumstances, be continued for another year. *See* Deed of Foundation, p. 410, CALENDAR, 1883-84.

1888. Thos. W. Eden, M.B., C.M.
1889. James Lackie, M.B., C.M.
1890. Wm. Paterson, M.B., C.M.
1891. Robert Cran, M.B., C.M.
1892. *Charles Cromhall Easterbrook (M.A), M.B., C.M.*

XVII.—HOPE PRIZE SCHOLARSHIP.

The Hope Prize Scholarship has been instituted in connection with the Chemical Laboratory of the University, and is of the value of about £21. It is awarded annually in March, to the student who, intending to continue his studies and attendance in the Chemical Laboratory, has, in the opinion of the Professor of Chemistry, most distinguished himself during the previous session in the Chemical Laboratory. He shall be bound, during the succeeding Summer and Winter Sessions, to assist the Professor of Chemistry in the Chemical Laboratory, and shall be subject to his directions as to the nature and amount of the assistance to be so given. For further particulars see CALENDAR, 1887-88, p. 424.

1889. William Cossar Mackenzie.
1889. Lapsed Scholarship, Thomas S. Murray.
1890. Alexander Dingwall White.
1891. Theodore Rettie.
1892. William White Taylor.
1893. *A. F. Watson.*

XVIII.—THE MOUAT SCHOLARSHIP IN THE PRACTICE OF PHYSICS.

This Scholarship, which will consist of the annual proceeds of about £1500 given by Frederick John Mouat, M.D., of the Local Government Board, London, formerly Professor of Medical Jurisprudence in the University of Calcutta, has been founded in connection with the class of Practice of Physic, but is not to be open for competition until the death of two liferenters.

XIX.—MACKAY SMITH SCHOLARSHIP IN CHEMISTRY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Chemistry in this University. The successful Candidate is bound to attend the Class of Chemistry, or to prosecute the study of Chemistry in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus Academicus may direct or approve. The next Examination will take place at the end of Session 1893-94.

1888. Martin Hugh Foye
1890. R. W. Briggs
1892. *J. W. Horne, M.A.*

III.—BURSARIES.

No of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1864	Dr Abercrombie, Cape Town.	£20 0 0	1	4	£20 0 0	Governors of George Heriot's Trust.
II.	1871	Dr J. R. Sibbald's Trustees.	About 150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
III.	1873	Dr Mackie's Trustees.	60 0 0	2	2	30 0 0	Professors of Fac. of Med. in Univ., Edin.
IV.	1873	Mr Grierson of Ogscastle's Trustees.	80 0 0	4	3	20 0 0	Senatus.
V.	1878	Dr Andrew Thomson	200 0 0	8	4	25 0 0	Trus. of Dr Thomson.
VI.	1878	William Mackenzie	42 10 0	2	1	21 5 0	Senatus.
VII.	1878	John Aitken Carlyle	56 0 0	2	1	28 0 0	Senatus.
VIII.	1882	Mrs Ronald of Liverpool	80 0 0	2		About 40 0 0	Senatus.
IX.	16—	George Heriot. Remodelled 1887	480 0 0	6	4	30 0 0	Governors of George Heriot's Trust.
X.	1890	Major Robert Orr Crichton of Lynn, M.D.	About 1000 0 0	20	4	50 0 0	Senatus Academicus.
XI.	1809	Dr Donald Grant, London.	80 0 0	2	4	90 0 0	Dr Grant's Trustees.
XII.	1846	John Jamieson, Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal and Two Professors.
XIII.	1883	Wm. Renton, Edinburgh.	19 19 6	1	1	19 19 6	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
XIV.	1886	Richard Allan, Feuar, Kelso.	90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
XV.	1889	Daniel Maclaurin, London.	70 0 0	1	4	70 0 0	Town Council.

I. *Abercrombie Bursary*—Open by competition, in the event of more than one candidate coming forward, to Students who have been brought up in Heriot's Hospital, and have finished their course as Heriot Bursars, to aid them in further prosecution of their studies for any of the learned professions. Students in the Faculty of Medicine to be always preferred. Candidates are referred to the Treasurer of the Heriot Trust, 20 York Place, Edinburgh.

II. *Sibbald Bursaries.*—These Bursaries, each tenable for three years, are available to Students in the Faculty of Arts, Medicine, Law, or Divinity, entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other Bursary or Scholarship,* but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. The examination is the same as the Preliminary and Bursary Examination in the Faculty of Arts at the commencement of each Winter Session. Application to be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh, before 22nd September.

III. *Mackie Bursaries.*—These Bursaries are awarded to Students of Medicine of the University, one of which is open to Students who have completed their First Annus Medicus, and the other to Students who have completed their Second Annus Medicus, and who are, in the opinion of the Faculty of Medicine, in such pecuniary circumstances as to require assistance. *Bursars*—1892, *Lawrence Ker, M.A.*, *Charles W. Anderson.*

IV. *Grierson Bursaries.*—Candidates from the parishes of Crawford or Leadhills, about to commence their Medical Curriculum, who have passed in the University of Edinburgh a satisfactory examination in the preliminary subjects required by Article I. of the Ordinances for Graduation in Medicine, who have been diligent students, and who require pecuniary aid to enable them to pursue their studies, have a preference. In the case of more candidates than one, the Bursary shall be awarded to the best qualified, on examination in the subjects above referred to.

Failing the appointment of preferential candidates, the Bursary will be tenable for periods of one year only, during four successive years, in manner following, viz. :—The 1st year Bursary shall be awarded to the student who has taken the highest place in the whole subjects required by Ordinance for the preliminary examination which has to be passed before the first professional examination, provided (1) that he has not already passed the said preliminary examination ; (2) that at the date of the examination he has not completed his twenty-first year ; and (3) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examinations of this University, which have to be passed before the First Professional Examination. The 2d year Bursary shall be awarded by competitive examination to the student commencing the Second Winter Session, who having already passed the subjects of the Preliminary Examination required for Graduation in Medicine, shall pass the best examination in the subjects of Chemistry, Botany, and Natural History. The 3d year Bursary shall be awarded by competitive examination to the student commencing the Third Winter Session who, having already passed the First Professional Examination, shall pass the best examination in the subjects of Anatomy and Physiology. The 4th year Bursary shall be awarded by competitive examination in the subjects of Materia Medica and Pathology. *Bursars*—1892, *first year*, *T. D. Maclaren* ; *second year*, not awarded ; *third year*, *Colin M'Vicar*, *M.A.* ; *fourth year*, *John C. Caldwell.*

V. One *Thomson Bursary* is awarded at each of the Preliminary Examinations held in Spring and Autumn, to the Candidate who, being about to commence his Curriculum, takes the highest place in a sufficient number of subjects to enable him to appear for Professional Examination : provided (1) that he has not already passed the said Preliminary Examination ; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examinations of this University which have to be passed before the First Professional Examination. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. Candidates claiming a preference must intimate their names to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, Edinburgh, the agents for the Trust (from whom further particulars may be obtained), before 22nd September 1893 and 21st March 1894 for the Examinations in Autumn and Spring respectively. *Bursars*—1888-89, *Alfred Cowper*, *William B. Craig;* 1889-90, *W. D. Adams*, *W. A. Potts;* 1890-91, *Duncan M. Mackay*, *Fred. R. Jones;* 1891-92, *Angus Macdonald*, *T. R. W. Armour;* 1892-93, *W. H. Fowler* (Preferential Candidate), *James Paterson* (Preferential Candidate).

VI. *Mackenzie Bursaries*, open to Students in the Junior and Senior Anatomy Classes, who shall display the greatest industry and skill in Practical Anatomy, awarded at the end of each Session. *See* CALENDAR for 1879-80, p. 353. *Bursars*—1893, Senior, *J. M. Beattie, M.A.*, *H. V. Münster*—equal; Junior, *E. F. Bashford* and *J. A. Murray*—equal.

VII. *John Aitken Carlyle Bursaries*, one open to Students of the first year, awarded after examination in Anatomy and Chemistry, the other to Students of the second year, awarded after examination in Anatomy and Physiology. *See* CALENDAR for 1879-80, p. 350. *Bursars*—1893, Senior, *J. H. Henderson;* Junior, *W. Hamilton.*

VIII. The *Anderson Bursaries* have been founded by Mrs Ronald of Liverpool, and will come into operation on the death of an annuitant. For Deed of Foundation, *see* CALENDAR 1882-83, p. 396.

IX. The *Heriot Bursaries* are for Students unconnected with the Hospital, entering upon a regular Curriculum with a view to graduation. (For remodelled scheme, see CALENDAR, 1887-88, p. 498.) For subjects of Examination, &c., see under Bursaries open in Faculty of Arts.

X. *Crichton Bursaries.*—These Bursaries are open to Students entering the Faculty of Medicine of this University who have been born in Scotland. The Examinations will be in Latin, Greek, French, German, Mathematics, Logic, and Moral Philosophy; and each Bursary will be of the annual value of £50, tenable for four years, provided the Bursars continue Students of the Medical Faculty of this University. Unapplied balances may be applied for a period of three years in assisting Bachelors of Medicine of the University, who have studied in the University for not less than four years, in the prosecution of any branch of Medical Study either at this University or at any other University. See Excerpt from Deed, p. 540 of CALENDAR for 1891-92.

XI. The *Grant Mortification* is for Students of the University of Edinburgh, of the name of Grant. The holders may attend the Arts, Medical, Divinity, or Law Classes. Application for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh.

XII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Roberton, Culter and Biggar. The Bursar may attend Classes in any of the Faculties.

XIII. The *Renton Bursary*, founded by the late William Renton, 20 Royal Terrace, Edinburgh, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of them as he may consider proper, and who may require assistance. The Bursary is tenable for one year, and cannot be held by any one under the age of sixteen or above twenty-one. It is filled up in November each year.

XIV. *Allan Bursaries.*—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

XV. *Maclaurin Bursary.* This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

IV.—PRIZES.

I.—NEIL ARNOTT PRIZE FOR EXPERIMENTAL PHYSICS.

This Prize, of the value of about £35, presented to the University by Dr Neil Arnott of London, is awarded annually in October to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the Degree of M.A. Candidates must have been Students of Medicine of this University during either a summer or a winter session; and the successful candidate must continue a Student of Medicine at this University during the next Winter Session, failing which, the prize will be forfeited and assigned to the competitor next in merit. No student can appear for examination after the completion of his third *annus medicus*; and no candidate shall be allowed to offer himself more than once.

In the event of a competitor, qualified as above, not coming forward, the prize will be awarded to a Candidate for a Degree in Arts who shall pass with most distinction the ordinary examination in Natural Philosophy. (*See* Deed of Foundation at p. 274 of CALENDAR for 1870-71.)

1887. T. W. E. Fisher
1888. H. S. W. Jones
1889. Andrew Walker
1890. O. D. Robson
1891. David Landsborough, M.A.
1892. *William F. Harvey*

II.—HOPE CHEMISTRY PRIZE.

This prize was founded by the late Professor Thomas C. Hope in 1844, for the promotion of the Study and Science of Chemistry in the University, in such manner as the Principal and Professors may appoint. It is competed for biennially, at a special examination open to all Students of the University who have worked for eight months or for two Summer Sessions, in the Chemical Laboratory of the University, and who are not more than twenty-five years of age. The examination is in Chemistry, and is conducted by the Professor of Chemistry, in conjunction with two Examiners appointed by the Senatus, and is practical as well as written. The successful Candidate is to spend the succeeding academical year in working in a Laboratory or Laboratories, under conditions approved by the Senatus, and to receive £100, in such sums, and at such intervals, as may be appointed by them.

No person can hold the Hope Chemistry Prize more than once.

A Competition for this Prize will be held in July 1893; Candidates must send in their names to the Professor of Chemistry prior to 20th June 1893.

1887. James Walker, B.Sc.
1889. { W. C. Mackenzie, B.Sc. / T. R. Marshall, D.Sc. } equal
1891. *John Shields*, *D.Sc.*

III.—THE ROBERT WILSON MEMORIAL PRIZE.

This Prize was founded by John Wilson of South Bantaskine, in memory of his son, Robert Wilson, and is of the value of £8, 16s. 2d. It is annually awarded at the close of the Winter Session to the student in the senior Chemistry Class who takes the highest honours. See Deed of Foundation at p. 351 of CALENDAR for 1876-77.

1889. F. C. M. Hutchinson
1890. Edward Crarer
1891 { James H. Frazer / George Shaw } equal
1892. John W. Paterson
1893. *William Hamilton*

IV.—THE ELLIS PRIZE FOR PHYSIOLOGY.

This Prize consists of the proceeds of a sum of £500 bequeathed by the late Daniel Ellis, Esq., to the Principal and Faculty of Medicine of the University of Edinburgh, accumulated for three or five years. Value about £25 per annum. It is awarded for the best Essay or Treatise on some subject of Animal or Vegetable Physiology proposed by the Faculty for competition to Students or Graduates of not more than five years' standing. The next award may be made in 1894. Subject—"The Functions of Wood." Essays in Competition to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1894.

1890. *Gustav Mann*

V.—PRIZES FOR THESES.

Gold Medals, each of the value of £10, are awarded annually on the day of graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

VI.—THE GOODSIR MEMORIAL PRIZE.

This Prize was founded in 1872 by the subscribers to the fund for a memorial of the late Professor John Goodsir. It is in the patronage of the Principal, Dean of the Faculty of Medicine, and Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, and is for the encouragement of the study of Anatomy and Physiology. It is given triennially, and is of the value of £60. It is open to all Graduates in Medicine of the University of not more than three years' standing at the time of the competition, and to Licentiates of the Colleges of Physicians or Surgeons of Edinburgh of a like standing, who have attended within the University the same number of classes as are required for the Degree of M.B. The Prize is awarded for the best Essay containing results of original investigations in Anatomy, Human and Comparative, either Normal, or Pathological, or in Experimental Physiology.

The next award may be made in August 1895, and competing Dissertations must be lodged with the Professor of Anatomy not later than the 30th April previously. *See* Deed of Foundation at p. 314 of CALENDAR for 1872-73.

1889. H. F. Waterhouse, M.D.
1892 *George Neil Stewart, D.Sc., M.D.* equal
Arthur John Whiting, M.D.

VII.—THE WIGHTMAN PRIZE IN CLINICAL MEDICINE.

This Prize of £10, 10s. was founded by Mrs E. Wightman, in memory of her son, J. T. Wightman, M.B., C.M., and is annually awarded at the close of the Summer Session to the student attending the Class of Clinical Medicine for the best Dissertation on any subject presented by the Faculty of Medicine, or for the best Report and Commentary on cases which have during the previous Winter and Summer Sessions been treated in the University Clinical Wards in the Royal Infirmary. Three months' notice of subject is given by the Faculty of Medicine. *See* Deed of Foundation at p. 348 of CALENDAR for 1876-77.

The Prize, which is open to members of the Clinical Class of either Winter 1892-93 or Summer 1893, will be awarded for the best report and commentary on cases. The Essays to be given in on 6th July.

1888. A. J. Whiting, M.B., C.M.
1889. Not awarded
1890. Not awarded
1891. Douglas C. Watson
1892. *D. A. Welsh, M.A.*

VIII.—THE BEANEY PRIZE.

This Prize of £37, 10s. was founded in 1878 by James George Beaney, Esq. of Melbourne. It is awarded at the Graduation Ceremonial in Medicine to the Graduate in Medicine and Surgery of the year who, having attended within the University courses on Anatomy, Surgery, and Clinical Surgery qualifying for Graduation, obtains the highest number of marks during his examinations in these subjects for the Degrees of Bachelor of Medicine and Master in Surgery. The Senatus has the power of withholding the Prize in the event of no Student passing the above examinations with sufficient merit. *See* Deed of Foundation at p. 371 of CALENDAR for 1878-9.

1887 { A. A. Brueré, M.B.C.M. / W. A. Turner, M.B.C.M. } equal
1888. J. C. Webster, M.B., C.M.
1889. Eustace Graham Pilgrim, M.B., C.M.
1890. G. Fitzgerald, M.B., C.M.
1891 { Harry Rainy, M.A., M.B., C.M. / G. Hennan, M.B., C.M. } equal
1892. *Alexander Brownlie, M.B., C.M.*

IX.—THE CAMERON PRIZE.

This Prize was founded in 1878 by the late Dr Andrew Robertson Cameron, of Richmond, New South Wales. It consisted of the annual proceeds of a sum of £2000, to be given annually "to the practitioner or member of the medical profession who shall be adjudged to have made the most valuable addition to Practical Therapeutics during the year preceding, and in determining such question, the word Therapeutics shall be taken in its widest sense as including every agent, or agency capable of influencing the human body in the maintenance or improvement of health, avoidance or cure of diseases, or the alleviation of suffering."

The regulations have been remodelled by the Educational Endowments (Scotland) Commission, and the annual proceeds, which, after defraying the necessary expenses, amount to about £80, may be awarded annually to a person who in the course of the five years immediately preceding has made any highly important and valuable addition to Practical Therapeutics. The Prizeman is required to deliver a lecture or course of lectures on the addition to Practical Therapeutics so made by him, or to publish an account of such addition in such manner as the Senatus may prescribe. The prize will not be awarded if, in the opinion of the Senatus, no addition to Practical Therapeutics has been made within the said period of five years of sufficient importance and value to justify the awarding of the prize. The prize is awarded annually at the Graduation Ceremonial in August. See Remodelled Regulations, p. 497 of CALENDAR for 1888-89.

1889. M. Pasteur.
1890. Sir Joseph Lister, Bart, M.B., LL.D., F.R.S.
1891. David Ferrier, M.D., F.R.S.
1892. No award.

X.—THE DOBBIE SMITH PRIZE IN BOTANY.

This prize, which consists of a Gold Medal, is open to competition each alternate year to all Matriculated Students of the year of the award, for an Essay on a Botanical subject. The subject of the next competition is an original investigation "On the Structure, Development, and Life History of any British Flowering Plant;" and the memoir is to be accompanied with a series of illustrative specimens. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before the 1st of July 1893. The prize will be awarded to the successful competitor at the Graduation Ceremony of August 1893.

1887. James A. Terras 1889. Gustav Mann 1891. No award

XI.-XXI.—THE GUNNING VICTORIA JUBILEE PRIZES.

Dr Gunning, of Edinburgh and Rio de Janeiro, has founded Eleven Post-Graduation Prizes of the value of £50 each, and each recurring triennially, viz.:—(1) The Monro prize for Anatomy; (2) The Bell prize for Physiology; (3) The Edward Forbes prize for Zoology, &c.; (4) The Hutton Balfour prize for Botany; (5) The Joseph Black prize for Chemistry; (6) The Christison prize for Materia Medica; (7) The Lister prize for Surgery; (8) The Gregory prize for Practice of Physic; (9) The John Thomson prize for Pathology; (10) The Simpson prize for Obstetrics; (11) The Alison prize for Public Health and Medical Jurisprudence. Candidates must be either Bachelors of Medicine or Bachelors of Science of this University of not more than three years' standing. The prizes will be awarded with the approval of the Senatus for (1st) either (*a*) Competitive Essays written specially for the prizes, or (*b*) Theses submitted for Graduation; or (2nd) for original research conducted under supervision of the Professor in the department in which the prize is awarded. The prizes in Anatomy, Chemistry, and Practice of Physic will be awarded in 1896; in Physiology, Botany, Surgery, and Pathology, in 1894; and in Zoology, Materia Medica, Obstetrics, Public Health and Medical Jurisprudence, in 1895. Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April of the year in which each prize is to be awarded, and the successful competitors will be announced annually at the Graduation Ceremonial in Medicine.

1889. Philip J. White, M.B., C.M. (Zoology)
,, Joseph Tillie, M.D. (Materia Medica)
,, Robert Muir, M.B. (Pathology)
1889. James A. Blair, M.B., C.M. (Public Health and Medical Jurisprudence)
,, John William Ballantyne, M.D. (Obstetrics)
1890. John Shields, B.Sc., (Chemistry)
1890. W. G. A. Robertson. M.D. (Anatomy)
,, *Prox. access.*, A. J. Whiting, M.B., C.M.
,, Practice of Physic Prize not awarded
1891. No award
1892. *Gregg Wilson*, *M.A.*, *B.Sc.* (Zoology)
,, *Alexander Houston*, *M.D.* (Public Health and Medical Jurisprudence)

XXII.—ANDERSON HENRY PRIZE.

The Prize was founded by Isaac Anderson Henry of Woodend, and consists of the proceeds of a sum of £300 accumulated for three years. It is awarded for the best and approved essay on a botanical subject proposed by the Professor of Botany, the Curator of the Royal Botanic Garden, and the President of the Botanical Society of Edinburgh, for competition to students in the Class of Botany in the University of Edinburgh, during any of the three years preceding the date of the award. The next award may be made in August 1893. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before 1st July 1893.

1890. *Robert Turnbull, B.Sc.*

XXIII.—MILNER FOTHERGILL MEDAL IN THERAPEUTICS.

This Medal, of the value of about £20, is awarded biennially. It is open for competition to Graduates in Medicine of the University, who have been members of the Class of Materia Medica in the University, for the best essay which shall include a description of original research made by the Candidate on a Pharmacological or Therapeutic subject, preference being given to a subject relating to Dietetics. See Deed of Foundation, p. 542 of CALENDAR for 1891-92. The first award may be made at the Graduation Ceremonial in August 1893. Essays to be lodged with the Professor of Materia Medica on or before 30th April 1893.

Of the foregoing Fellowships, Scholarships, Bursaries, and Prizes, the following are open to competition during the Summer Session 1893, and Winter Session 1893-94.[1]

FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES OPEN TO COMPETITION IN THE FACULTY OF MEDICINE IN 1893-94.[1]

FELLOWSHIPS.

For further information, and for information regarding other Scholarships, Fellowships, Bursaries, and Prizes, see pages 506 to 522, where full information regarding the conditions of tenure and the values are given.

1. *The Syme Surgical Fellowship* (No. I. p. 506).
2. *The Freeland Barbour Fellowship* (No. IV. p. 507).

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[1] *N.B.*—The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c.

SCHOLARSHIPS.

Three Vans Dunlop Scholarships—

3. One in Botany, Zoology, Chemistry, and Anatomy (No. VI. p. 510).

4. One in Anatomy Physiology, Materia Medica, and Pathology (No. VIII. p. 510).

5. One in Chemistry and Chemical Pharmacy (No. XI. p. 511). The next Competition will take place on 26th March 1894, at 10 and 1 o'clock. Names of Candidates to be given in, and Certificates shown, not later than 1st March.

6. *The Murchison Memorial Scholarship* (No. XIII. p. 511). The competition in 1893 will take place in Edinburgh, and that in 1894 will take place in London. The competition in each place is open to Candidates from London and Edinburgh.

7. *The Stark Scholarship in Clinical Medicine* (No. XIV. p. 512). The next competition will take place in July 1894.

8. *The Buchanan Scholarship* (No. XV. p. 512).

9. *The James Scott Scholarship* (No. XVI. p. 512).

10. *The Ettles Scholarship in Medicine* (No. I. p. 508).

11. *The Hope Prize Scholarship* (No. XVII. p. 513).

12. *The Mackay Smith Scholarship in Chemistry* (No. XIX. p. 513). The Examination wiil be held on 26th March 1894, at 10 o'clock A.M. Names of Candidates to be entered at the Faculty of Medicine Office on or before 16th March.

BURSARIES.

1. *Two Sibbald Bursaries* (No. II. p. 514).

2-5. *Six Heriot Bursaries* (No. IX. pp. 514, 516).

6, 7. *Two Thomson Bursaries* (No. V. pp. 514, 515). Candidates claiming a preference must apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, before 22nd September 1893, and 21st March 1894.

8-11. *Four Grierson Bursaries* (No. IV. pp. 514, 515). One for Preliminary subjects, in October 1893. One for Chemistry, Botany, and Natural History. One for Anatomy and Physiology. One for Materia Medica and Pathology. The Examinations for the First year Bursary begin on 2nd October, and for the Second, Third, and Fourth year Bursaries on Saturday, 21st October 1893.

12, 13. *Two John Aitken Carlyle Bursaries* (No. VII. pp. 514, 516).

14, 15. *Two Mackenzie Bursaries* (No. VI. pp. 514, 516).

16. *Renton Bursary* (No. LXX. pp. 253, 261, and 286).

Competitors for the above Bursaries, excepting those awarded for the subjects of Preliminary Examination, must have studied the subjects of Examination at the University of Edinburgh. No Fellowship, Scholarship, or Bursary, with the exception of the Ettles Scholarship, can be held along with any other Fellowship, Scholarship, or Bursary.

PRIZES.

The Medical Faculty Medals.—Gold Medals are given on the day of Graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

1. *The Beaney Prize* (No. VIII. p. 520).
2. *The Neil Arnott Prize* (No. I. p. 517).
3. *The Cameron Prize* (No. IX. p. 520).
4. *The Gunning Victoria Jubilee Prizes in Physiology, Botany, Surgery, and Pathology* (No. XI. p. 521). Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1894.
5. *The Wightman Prize in Clinical Medicine* (No. VII. p. 519).
6. *The Hope Chemistry Prize* (No. II. p. 518). The Competition will take place in the Chemical Laboratory in July 1893. Names of Candidates to be intimated to the Professor of Chemistry before 20th June 1893.
7. *The Dobbie Smith Gold Medal in Botany* (No. X. p. 521).
8. *The Lord Rector's Prize* (No. 1. p. 283).
9. *Three Gray Prizes* (Nos. 6, 7, 8, p. 283).
10. *The Ellis Prize in Physiology* (No. IV. p. 518).
11. *The Milner Fothergill Gold Medal* (No. XXIII. p. 522).
12. *The Anderson Henry Prize* (XXII. p. 522).

WILLIAM DICKSON TRAVELLING FUND.

13. *The William Dickson Travelling Fund.* See page 280.

N.B.—*Scholars, Bursars, or Fellows must apply to the Dean of the Faculty of Medicine, for Certificates to entitle them to draw the instalments due, and to the Factor for payment thereof, within three months after they have become payable, otherwise they will be regarded as having resigned. Any who desire to resign must at once announce this to the Dean and to the Factor.*

LECTURSHIP.

The Swiney Lectureship on Geology (No. III. page 507).

THOMAS R. FRASER, M.D.,
Dean of the Faculty of Medicine and
Professor of Materia Medica.

II.

GRADUATION IN SCIENCE.

1893-94.

Conveners of Science Degrees Committee.

MENTAL SCIENCE AND PHILOLOGY SECTIONS — PROFESSOR CALDERWOOD, LL.D., 7 Napier Rood, Edinburgh.

PURE SCIENCE, ENGINEERING, PUBLIC HEALTH, AND AGRICULTURE SECTIONS — PROFESSOR GEIKIE, D.C.L., LL.D., F.R.S., &c., 31 Merchiston Avenue, Edinburgh.

Graduation in Science.

Programme of Classes.

SUMMER SESSION, 1893.

The Classes will be opened as follows. They will meet daily (Saturdays excepted), unless otherwise stated; and will be closed on Friday, 21st July.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.	
Senior Latin (Graduation Half-Course),	2 May, 9 o'cl.	F. R. Jamieson, M.A.	2	2
Senior Greek (Graduation Half-Course)	2 May, 10 ,,	A. D. Thomson, M.A.	2	2
Sanskrit....................	2 May, 3 ,,	Prof. Eggeling,	3	3
Elementary Hebrew[1]...	2 May, 10 ,,	Prof. Dobie and Assistant.	2	2
Elementary Arabic.....	2 May, 11 ,,			
Ancient Philosophy (Honours Half-Course, *Mon., Wed., & Fri.*),............	3 May, 11 ,,	R. P. Hardie, M.A.	2	2
Psychology (Honours Half-Course, *Mon., Wed,, Fri.*	3 May, 12 noon.	C. M. Douglas, M.A., D.Sc.	2	2
Senior Mathematics (Graduation Half-Course)	2 May, 11 o'cl.	Charles Tweedie, M.A.	£2	2
Physics (*mainly for Students of Medicine*)	2 May, 12 ,,	Prof. Tait....... ...	3	3
Physical Laboratory ...	2 May, 10 ,,	Prof. Tait and Assistant......	2	2
Chemistry (Organic), Advanced Class — (*Tues., Wed., & Thur.*)	2 May, 1 ,,	Prof. Crum Brown.........	2	2
Do. (Practical)..........	2 May, 2 ,,		3	3
Anatomical Demonstrations...............	2 May, 11 ,,	Prof. Sir Wm. Turner	2	2
Practical Anatomy......	2 May, ,,			
Anthropology[2] (*Tues., Wed., & Fri.*)	9 May, 2 ,,		2	2

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[1] To prepare Students for entering the Junior Class in Winter Session.

[2] When taken with Practical Anatomy, £1, 1s.

SUMMER SESSION—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
Practical Physiology, including Histology	2 May, 3 o'cl.	Prof. Rutherford..	£3 3
Geology (*Mon.*, *Wed.*, *Fri.*)…………………	3 May, 4 ,,	Prof. Geikie,…….	3 3
Field Demonstrations on *Saturdays.*	6 May, 4 ,,		
Zoology (Elementary).	2 May, 1 ,,	Prof. Ewart…..	4 4
Do. (Advanced)…	2 May, 3 ,,		2 2
Practical Zoology (Elementary)…….	2 May, ,,		2 2[1]
Do. (Advanced)	3 May, 3 ,,		3 3[1]
Botany …………………	2 May, 8 ,,	Prof. Bayley Balfour…….	4 4[2]
Practical Botany……..	2 May, 9 ,,		2 2
Field Demonstrations on *Saturdays.*			
Engineering Field-Work (Surveying, Levelling, &c.) ……	20 June 9.30 ,,	Prof. Armstrong…	3 3
Forestry ………………	2 May, 9 ,,	Col. Bailey, R.E.	2 2[3]

WINTER SESSION, 1893-94.

The classes will be opened as follows, and will meet daily (*Saturdays excepted*), *unless otherwise stated:—*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.
Junior Latin……….	17 Oct., 9 o'cl., & also on Mon. & Wed. 11 o'cl.	Prof. Goodhart	£3 3
Senior Latin………..	17 Oct., 10 ,,		3 3
Honours Latin………	19 Oct., 12 ,,		3 3
Junior Greek………	17 Oct., 10 ,, and also on Tues., Th., & Fri., 11 o'cl.	Prof. Butcher	3 3
Senior Greek………..	17 Oct., 11 o'cl.		3 3
Honours Greek……..	19 Oct., 9 ,,		3 3

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[1] Besides charge of 10s. for Laboratory Expenses. [2] Besides Garden Fee of 5s.
[3] Five shillings University Entrance Fee for Non-Matriculated Students.

WINTER SESSION, 1893-94—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees	
Sanskrit (Junior Class)	24 Oct., 3 o'cl.	Prof. Eggeling	£4	4
Do. (Senior Class)	24 Oct., 4 ,,		4	4
Hebrew (Junior Class)	1 Nov., 1 ,,	Prof. Dobie. ...	3	3
Do. (Senior Class)	1 Nov., 2 ,,		3	3
Arabic	9 Nov., 3 ,,		3	3
Syriac[1] *Tues. & Th.*	9 Nov., 4 ,,		2	2
Logic and Psychology	17 Oct., 1 ,,	Prof. Seth......	3	3
Metaphysics and History of Philosophy (Honours Class, *Mon. Thurs.*)	23 Nov., 3 ,,		2	2[2]
Moral Philosophy.....	17 Oct., 2 ,,	Prof. Calderwood.........	3	3
Do. Honours Class (*Wed., Fri.*)........	25 Oct., 3 ,,		2	2[2]
Junior Mathematics...	17 Oct., 12 ,,	Prof. Chrystal	3	3
Senior Mathematics...	17 Oct., 9 ,,		3	3
Mathematics (Intermediate Honours)	23 Oct., 11 ,,		3	3
Do. (Advanced Honours).........	17 Oct., 10 ,,		3	3
Natural Philosophy...	17 Oct., 11 ,,	Prof. Tait........	3	3
Do. (Advanced Honours).	25 Oct., 12 ,,		3	3
Physical Laboratory .	6 Nov., 10 ,,		2	2
Natural Philosophy (Intermediate Honours Course) (*Mon., Wed., Fri.*)	18 Oct., 9 ,,	Cargill G. Knott, D.Sc..........	3	3
Dynamics (Advanced Science Course) (*Mon., Wed., Fri.*)	18 Oct., 10 ,,		3	3
Practical Astronomy (*Mon., Tues., Th.*)	24 Oct., 11 ,,	Prof. Copeland..	3	3
Chemistry	10 Oct., 10 ,,	Prof. Crum Brown	4	4
Practical Chemistry...	4 Dec., 11, 2,,		3	3
Anatomy	10 Oct., 1 o'cl.	Prof. Sir Wm. Turner..........	4	4
Practical Anatomy ...	2 Oct., daily.		3	3

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[1] On Tuesdays and Thursdays there will be a Tutorial Class in Arabic.

[2] When taken as a Graduation Course, £3, 3s.

WINTER SESSION, 1893-94—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.	
Anatomical Demonstrations	10 Oct., 4 o'cl.	Prof. Sir Wm. Turner	2	2[1]
Physiology	10 Oct., 10 ,,	Prof. Rutherford	4	4
Practical Physiology	11 Oct., 1 ,,		3	3
Geology & Mineralogy	17 Oct., 4 ,,	Prof. Geikie	4	4
Prac. Class (*Mon.*, *Wed.*, *&* *Fri.*)	23 Oct., 2-4 ,,		2	2
Zoology (Elementary)	10 Oct., 12 ,,	Prof. Ewart	4	4
Do. (Advanced)	10 Oct., 3 ,,		2	2
Practical Zoology (Elementary).	10 Oct., 11 ,,		2	2[2]
Do. (Advanced)	10 Oct., 1.30 ,,		3	3[2]
Botany	10 Oct., 2.30 ,,	Prof. B. Balfour	4	4[3]
Prac. Bot. Element.	10 Oct., ,,		2	2
Do. do. Advanced	10 Oct., 11 ,,		3	3
Economics as applied to Agriculture. (*The Political Economy Class in Arts till Christmas*)	17 Oct. 5 ,,	Prof. Nicholson	2	2
Agriculture and Rural Economy	18 Oct., 9 ,,	Prof. Wallace	4	4
Forestry (*Tues.*, *Wed.*, *&* *Thurs.*	25 Oct., 4 ,,	Col. Bailey, R.E.	2	2[4]
Agricultural Entomology (Twenty Lectures)	9 Jan., 2 ,, ,,	W. Fream, LL.D., B.Sc. (Lond.)	2	2[4] [5]
Engineering	2 Nov., 9 ,,	Prof. Armstrong	4	4
Do., Short Additional Course	10 Jan., 1 ,,		1	1[4, 6]
Geometrical & Mechanical Drawing	3 Nov., 10 to 2 ,,		3	3
Sanitary Engineering and Drawing	8 Nov., 10 ,,		3	3
Public Health Lectures	25 Jan. 3 ,,	Prof. Sir Douglas Maclagan		

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[1] When taken along with Practical Anatomy, £1, 1s.
[2] Besides charge of 10s. for Laboratory Expenses.
[3] Besides Garden Fee of Five Shillings.
[4] Five Shillings University Entrance Fee for Non-Matriculated Students.
[5] Free to all present and past Students of the Agriculture Class.
[6] No Class fee for Students of the regular Class of Engineering.

The following means are afforded for Practical Instruction:—

LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals, Rocks, and Fossils, and the methods of plotting and drawing geological maps and sections, is open on Monday, Wednesday, and Friday from 2 to 4, under the superintendence of Professor Geikie.

ENGINEERING DRAWING CLASS ROOM, open daily during the Winter Session, from 10 A.M. to 2 P.M., for practical instruction in drawing and drawing office routine.

THE ENGINEERING (FULTON) LABORATORY, open on fixed days during the Winter Session, for the practical instruction of Students in the processes employed by the Engineer in the Experimental Determination of the Physical and Economical Constants of Materials, Machines, and Prime Movers, and in the Practical Applications of Electricity.

PRACTICAL INSTRUCTION IN OFFICE AND FIELD-WORK, daily, in connection with the Summer Course of Lectures on Surveying, Levelling, &c., from 11 A.M. to 4 P.M. each day.

The AGRICULTURE DEPARTMENT in the Museum of Science and Art is open daily to Students attending the Agriculture Class. Excursions to farms are made on Saturdays by Members of the Agriculture Class, and demonstrations are given from time to time in the Agriculture Laboratory. The leading agricultural newspapers are left for the use of Students in the Agriculture Lecture Room.

The ROYAL OBSERVATORY is open to Students of Practical Astronomy on two evenings of the week, from 8 P.M.

ROYAL BOTANIC GARDEN and BOTANICAL MUSEUM AND LABORATORY.—These, as well as the Herbarium, with which is incorporated the Collection of dried plants belonging to the University, are used by University Students for the practical study of plants and for botanical research, and are open daily.

PHYSIOLOGICAL LABORATORY, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by E. W. Carlier, M.D., C.M., B.Sc., and Gustav Mann, M.B., C.M.

The CHEMICAL LABORATORIES (distinct from the Practical Chemistry Room), completed in 1885, contain accommodation for forty Students. The Laboratories, which are fitted with all necessary apparatus for chemical analysis and research, are open daily, under the superintendence of the Professor, assisted by Leonard Dobbin, Ph.D. ; Hugh Marshall, D.Sc. ; and Theodore Rettie, B.Sc.[1]

DISSECTING ROOMS, open daily under the superintendence of Professor Sir William Turner, assisted by David Hepburn, M.D. ; James Musgrove, M.D. ; and other assistants. Opens 2nd October 1893.

NATURAL HISTORY LABORATORIES, for research and for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, M.Sc., Ph.D.[1]

PUBLIC HEALTH LABORATORY, for Hygienic investigation, comprises three departments, viz. : a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of the Professor, assisted by Charles Hunter, Stewart, M.B., C.M., B.Sc. Opens 2nd May and 2nd October 1893.[1]

EMBRYOLOGICAL LABORATORY, for research and for study of the development of Vertebrate and Invertebrate types, open daily under the superintendence of the Lecturer.

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[1] Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

Graduation in Science.

COURSES OF LECTURES, 1893-1894.

I.—MENTAL SCIENCE.

I. LOGIC AND METAPHYSICS.

PROFESSOR SETH.

For Synopsis of Lectures see under Faculty of Arts.

II. MORAL PHILOSOPHY.

PROFESSOR CALDERWOOD.

For Synopsis of Lectures see under Faculty of Arts.

II.—PHILOLOGY.

I. LATIN.

PROFESSOR GOODHART.

For Synopsis of Lectures see under Faculty of Arts.

II. GREEK.

PROFESSOR BUTCHER.

For Synopsis of Lectures see under Faculty of Arts.

III. SEMITIC LANGUAGE.

PROFESSOR DOBIE.

For Synopsis of Lectures see under Faculties of Arts and Divinity.

IV. SANSKRIT LANGUAGE AND COMPARATIVE PHILOLOGY.

PROFESSOR EGGELING.

For Synopsis of Lectures see under Faculty of Arts.

III.—PURE SCIENCE.

I. MATHEMATICS.

For Synopsis of Lectures see under Faculty of Arts.

II. ZOOLOGY, including COMPARATIVE ANATOMY.

PROFESSOR EWART.

For Synopsis of Lectures on Zoology and of Courses on Practical Zoology, see under Faculty of Medicine.

COMPARATIVE EMBRYOLOGY.

LECTURER, MR GEORGE BROOK.

For Synopsis of Lectures see under Faculty of Medicine.

III. BOTANY.

PROFESSOR BAYLEY BALFOUR.

For Synopsis of Lectures on Botany see under Faculty of Medicine.

IV. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

For Synopsis of Lectures on Natural Philosophy, &c., see under Faculty of Arts.

V. CHEMISTRY.

For Synopsis of Courses see under Faculty of Medicine.

VI. PRACTICAL ASTRONOMY.

PROFESSOR COPELAND.

Lectures on Practical Astronomy will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays. Instruction in the use of portable and fixed Astronomical Instruments will be given at the Royal Observatory on Calton Hill on Fridays, beginning at 8 P.M. The Lectures consist of two Courses, viz.: (1) The Theory and Use of Astronomical Instruments, together with as much General Astronomy as is requisite to guide the Student in making observations in the field as well as in an observatory; (2) The Utilization of Observations of Comets, &c. in the Computation of Orbits and Ephemerides.

VII. HUMAN ANATOMY, including ANTHROPOLOGY.

PROFESSOR SIR WILLIAM TURNER.

For full Synopsis of Lectures on Anatomy see under Faculty of Medicine.

ANTHROPOLOGY.

In the event of a sufficient number of Students expressing their intention of selecting Human Anatomy, including Anthropology, as a subject for the Degree of Bachelor of Science, the Professor of Anatomy will be prepared to deliver, during the Summer Session, a course of twenty-five Lectures on Physical Anthropology. Fee, £2, 2s. To Students who take the Summer Course of Practical Anatomy, the fee for this Class of Anthropology is £1, 1s.

VIII. PHYSIOLOGY.

PROFESSOR RUTHERFORD.

For Synopsis of Lectures see under Faculty of Medicine.

IX. GEOLOGY, including MINERALOGY.

PROFESSOR JAMES GEIKIE.

Winter Course.

I. CLASS OF GEOLOGY AND MINERALOGY.—This Class meets daily, at 4 o'clock. The Course embraces a system of instruction in the following subjects :—

1. *The History of Geology*—an outline of the growth of the science from the time of the early cosmogonies downwards.

2. *Dynamical Geology*—a discussion of the nature and causes of geological changes effected on the surface and within the interior of the earth.

3. *Mineralogy*—an account of the physical and chemical characters of minerals, and a description of some of the more important and typical species in the various mineral groups.

4. *Petrology*—a description of the various families of rocks.

5. *Structural Geology*—a description of the geological structure and relations of rock-masses to each other.

6. *Palæontological Geology*—an account of the nature and use of fossils in geological inquiry.

7. *Historical Geology*—the history of the successive geological periods.

8. *Physiographical Geology*—an inquiry into the origin of the present outlines of the earth's surface.

> *Text-Books*—"Outlines of Geology," by the Professor (*Stanford*); Hatch's "Mineralogy" (*Whittaker*); Hatch's "Petrology" (*Sonnenschein*). More detailed works of reference, most of which are in the College Reading-Room, are recommended for each branch of the lectures.

II. CLASS OF PRACTICAL MINERALOGY AND GEOLOGY.—This Class meets for two hours (2 to 4), on Mondays, Wednesdays and Fridays, under the superintendence of Professor Geikie. The course of instruction is as follows :—

1. *Blowpipe Analysis of Minerals.*

2. *Macroscopic and Microscopic Determination of Minerals and Rocks.*

> *Text-Books.*—Various works of reference, most of which will be found in the College Reading-Room, are recommended.

III. FIELD DEMONSTRATIONS.—Short excursions are made on Saturdays to places of geological interest in the neighbourhood of Edinburgh, when the Class Lectures are illustrated by demonstrations in the field, and practical instruction is given in Geological Surveying. At the close of the Session (usually in the last week of April) an excursion, extending over a week or thereabout, may be made for the purpose of examining the structure of a more distant district.

These Field Demonstrations are open to Students attending either the Class Lectures or the Practical Class.

Adjoining the Geology Class-room there is a small Museum exhibiting the characters of minerals and rocks, and the typical fossils of the different geological systems.

Summer Course.

The following subjects are dealt with in this Course :—

1. *Petrology.*—(The lectures are illustrated by demonstrations in the Laboratory and the Class Museum.)

2. *Palæontological Geology.*—(A collection of the typical fossils of the different formations occurring in Britain will be found in the Class Museum.)

3. *Structural Geology.*—Under this head *Dynamical Geology* is discussed in more or less detail.

4. *Geological Surveying.*

5. *Economic Geology: application of Geology to Mining, Engineering, Agriculture, Public Health, &c.*

6. *Physiographical Geology.*

Structural and *Field Geology* form the principal portion of this Course, but no previous knowledge of Geology is required on the part of the student—the elementary principles upon which the science is based being set forth both in the lecture-room and the field. The Class meets on Mondays, Wednesdays, and Fridays at 4 o'clock, and a series of practical lessons on the study of rocks will be given at the commencement of the Session on Tuesdays and Thursdays at the same hour. The Saturdays are devoted to field demonstrations, when the mode of geological mapping and section-drawing is explained and illustrated.

IV.—APPLIED SCIENCE.

GRADUATION IN ENGINEERING.

I. ENGINEERING.

PROFESSOR ARMSTRONG.

Winter Session.

I. CLASS OF ENGINEERING.—The Object of the Course will be to show the practical application of Science to some branches of Engineering. The Series of Lectures will form a Two Years' Course, so arranged that Students can enter the Class at the beginning of either year. The following are the subdivisions of the subject-matter of the complete Course, a part only of each subdivision being dealt with each year:—

1. Applied Mechanics; 2. One Branch of Civil Engineering; 3. One Branch of Mechanical Engineering; 4. A Series of

Examples of the Application of Machinery to Manufacturing Purposes.

Synopsis of the Lectures for the present Session :—

1. Principles of Statics; couples; moments of forces; parallel and inclined forces; centre of gravity; moment of inertia; friction.

2. Hydrostatics.

3. Principles of Kinematics. Newton's laws of motion. Conservation and transformation of energy.

4. Hydrokinetics.

5. Arrangement and construction of water-works for the supply of towns.

6. Drainage, ventilation, warming, and sanitary requirements.

7. Water-wheels, pumps, and turbines.

8. Millwork and gearing, spur and bevil wheels.

9. Efficiency of various modes of transmitting power.

10. Locomotives.

11. Elements of machine design.

Four Examinations are held during the Session; and each week, unless there be an Examination, exercises are given to be worked at home. The questions set are such as are met with in the practice of Engineering; and the papers being returned to the Students, annotated and corrected, form a body of Examples for subsequent reference.

Engineering Works and Factories will be visited by the Class, under the guidance of the Professor.

II. CLASS OF GEOMETRICAL, MECHANICAL, AND ARCHITECTURAL DRAWING.—Students can attend this Class at any time between the hours of 10 A.M. and 2 P.M. each day. Work will be examined and instructions given by the Professor at 10 A.M. At other times the Class will be in charge of an Assistant.

All Students are recommended to take the Classes in Engineering and Drawing together.

The Class in Drawing may also be attended with advantage by those who propose in subsequent years to attend the Class in Engineering, as it is of great importance that Students should be able to readily understand mechanical diagrams, and to apply the graphic methods of calculation frequently employed by Engineers.

Instruction is given in the elements of Geometrical Drawing, the making of figured sketches from actual measurements, and subsequently in the Design and preparation of Working Drawings of Structures and Machines.

III. ADDITIONAL COURSES.—Short courses of lectures on special subjects treated in detail, will be given from time to time.

During the present Session there will be such a course of about twenty lectures, the subject of which will be duly announced.

IV. TUTORIAL CLASS.—A Tutorial Class, at which the questions proposed in the Weekly Exercises are discussed and explained, is held each week.

There is no extra Fee required for either of the foregoing (III. and IV.) from Students attending the Ordinary Class in Engineering (I.).

V. THE FULTON ENGINEERING LABORATORY.—In this Laboratory Students receive practical instruction in the processes employed by the Engineer in the experimental determination of the physical and economical constants of materials, machines, and prime movers, and in the practical applications of electricity.

VI. A COURSE OF INSTRUCTION (Theoretical and Practical) IN SANITARY ENGINEERING, MENSURATION, AND DRAWING, designed to meet the requirements of Candidates for Degrees, or Diplomas, in Public Health.

Summer Session.

VII. ENGINEERING FIELD-WORK.—A course of Practical Instruction in Surveying, Levelling, Setting Out, and Calculation of Quantities, is given during the Summer Session.

The course consists of lectures, and of practical work, as undertaken in the field and in the office, and occupies the whole of each day for about three weeks. The number of hours during which instruction is given, is thus made to correspond to an ordinary course extending over a much longer period.

Course of Study.

The following course of study is recommended :—

1st Year.—Mathematics (1st Class), Geometrical Drawing, Chemistry, Engineering Field-Work, Geology (Summer Session).

2d Year.—Mathematics (Special Class), Natural Philosophy, Engineering, Mechanical Drawing.

3d Year.—Dynamics (Special Class), Engineering, and Drawing.

If the Student is sufficiently well prepared, some modification of the foregoing may be found desirable.

For particulars of Scholarships, &c., tenable in connection with the Department of Engineering, see SCHOLARSHIPS, (Arts, &c.).

A detailed Syllabus of the Lectures and Courses of Instruction in the Department of Engineering is issued annually, and may be had on application.

II. DYNAMICS.

DR C. G. KNOTT, LECTURER.

A complete Advanced Science Course on Dynamics, of at least Fifty lectures, will be given by the Lecturer on Applied Mathematics. This course is adapted for the needs of Engineering Students. In the treatment of the subject practical applications and, in particular, graphical methods of solution will receive attention ; while the simpler processes only of the differential and integral calculus will be made use of. The Course will include the Kinematics, Kinetics, and Statics, of particles, rigid solids, flexible cords, and perfect fluids ; also attractions, and the more elementary parts of Strains and Elasticity.

Books recommended : the simpler sections of the Article *Mechanics* in the last edition of the *Encyc. Brit.* ; MacGregor's *Kinematics and Dynamics* ; Rankine's *Applied Mechanics.*

V.—GRADUATION IN PUBLIC HEALTH.

PUBLIC HEALTH.

PROFESSOR SIR DOUGLAS MACLAGAN.

For Synopsis of Lectures, &c., see Faculty of Medicine.

VI.—GRADUATION IN AGRICULTURE.

I. AGRICULTURE AND RURAL ECONOMY.

PROFESSOR WALLACE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.

2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the different Methods of Management and Improvement.

3. *Drainage.*—Its Practice and Advantages—Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.

4. *Implements and Machines of the Farm.*—The Importance of their proper Construction and careful Management.

5. *Steam Cultivation.*—Its Advantages and Disadvantages.

6. *The Motive Powers Employed on the Farm.*—1st, Man; 2d, Horse; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.

7. *Farm Servants.*—Their Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour on different Classes of Farms.

8. *The Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (including Grain, Root, Forage, and Hay Crops).—Their Selection and Cultivation. Insect Injuries and Diseases, and the best Means of Prevention.

10. *Identification of Grasses and other Valuable Pasture Plants.*—Character and Habits of those of importance—Detection of Adulterations of Seeds—Regulations necessary to protect the Farmer in buying Seeds.

11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures* and Means of Destroying them.

13. *Silage and the System of Ensilage.*—Its Advantages, &c. —Its Suitability and Unsuitability according to Locality.

14. *Manures.*—Farm-yard Manure—its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials—their Uses, Abuses, and Adulterations—the proper Times and Methods of their Application. The Value of Liquid Manure and Town Sewage, and how to utilise them.

15. *Buildings and Fences.* — The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c. — Covered Yards — Ventilation — Drainage.

16. *Live-Stock, embracing Cattle, Pigs, Horses, Sheep, Poultry.*—The Various Breeds of each, and suitability of some to Local Conditions—"The Principles of Breeding." Feeding and Management—Cost of Feeding—Proper Mixtures of Food to use. Cost of the Production of a Stone of Beef, Mutton, and Pork, showing the Amount of Profit in each case.

17. *Dairying in all its Branches*, including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale, or its Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs.*—Suitability of the Common Food Substances to the different Classes of Farm Stock—the Purchase, Storing, and Administration of the same—their Manurial Residues.

Text-Books.—Wallace's "Farm Live Stock of Great Britain," M'Connell's "Note-Book of Agricultural Facts and Figures," J. B. Harris's "Cheese and Butter Making," Fream's "Elements of Agriculture," "Rothamsted Experiments," and "Soils and their Properties," and the books in "Bell's Agricultural Series."

Students are requested to consult with the Professor of Agriculture at the beginning of the Session as to the plan and arrangement of their work.

In connection with the Class there are, in addition to the Medal and First and Second Class Certificates, the Steven Scholarship of about £75 and the Vans Dunlop Scholarship of £300. Particulars will be found under *Scholarships* in the Faculty of Arts. The Highland and Agricultural Society of Scotland gives £10 to be spent on Books for Class Prizes.

Periodical Excursions will be made to some of the best Farms in the Lothians. A Medal is given to the student who writes the best report of the same.

II. ECONOMICS.

PROFESSOR NICHOLSON.

The Lectures in Political Economy up to Christmas, qualify for the B.Sc. in Agriculture. See under Faculty of Arts.

III. FORESTRY.

LECTURER—COLONEL BAILEY.

This class meets on Tuesday, Wednesday, and Thursday, at 4 P.M., during winter, and on five days a week at 9 A.M. during summer.

1. *Forest Botany*, or the structure and growth of trees.

2. *Sylviculture.*—The habit of trees, and their behaviour under the influence of heat, light, moisture, climate; various classes of soil, &c.; the more important sylvicultural systems under which trees are grown in masses; the creation and treatment of woods under these systems.

3. *Mensuration and Valuation.*—Measurement of felled and of growing timber; enumeration of stock; periodic increments.

4. *Working Plans*, or the organisation of woods in such a manner that they may best fulfil the objects for which they are maintained; annual or periodic yield.

5. *Forest Pathology.*—The diseases of trees, and their treatment.

6. *Utilization of Forest Produce*, including felling, export,

properties of timber, and the principal uses to which it is applied.

7. *Forest Fires;* treatment of *Sandhills;* treatment of *Mountain Torrents*, &c.

8. *Utility of Woodlands.*

IV. AGRICULTURAL ENTOMOLOGY.

Course of 20 *Lectures, with Laboratory Demonstrations.*

STEVEN LECTURER—W. FREAM, LL.D., B.SC. LOND.,
F.L.S., F.G.S., ETC.

(*Free to Present and Past Students of the Agricultural Class.*).

The position of Insects in the Animal Kingdom.

The morphology and physiology of Insects, particularly in so far as a knowledge of these can be turned to useful account in baffling the attacks of insect pests. The structural modifications of the mouths, legs, and wings of Insects.

The life-history of insects.

Enunciation of the general principle that where the life-history involves a series or cycle of changes, the measures of suppression should be directed against the weakest link in the chain. Illustrations.

Methods of insect attack, and the enormous losses consequent thereon. Incidentally :—

(*a*) The stage in the life-history of the insect at which it becomes actively injurious.

(*b*) The period in the growth of the crop when insect injury begins, and the organs of the plant which are attacked.

Methods of *prevention* of insect attack, as distinguished from methods of *remedy*.

The *general* methods of prevention or remedy, as distinguished from the *special*. The former are, in the main, agricultural. The latter usually involve the application of specific insecticides, or the subjection of the crop to a course of treatment distinct from ordinary agricultural operations.

Insecticides : the composition and properties of the more important. The methods of application.

Mechanical appliances for the distribution of insecticides.

The inter-relationship of economic entomology and systematic botany.

The natural enemies of insects; particularly (*a*) insectivorous mammals and birds, (*b*) other insects, (*c*) parasites.

The classification of insects, directed especially to the means of identifying injurious insects in the several stages of their life-history.

The characters of the natural orders of insects illustrated by genera which furnish destructive species.

Special discussion of the natural orders Coleoptera, Hymenoptera, Lepidoptera, Homoptera, and Diptera.

Convenient groupings of insects—

(*a*) According to the crop attacked.
(*b*) According to the mode of attack.

A detailed discussion of the chief insects injurious to cultivated plants and to farm live stock in Britain, with methods of prevention and remedy.

These insects include, *inter alia*—Wire-worms, weevils, turnip flies, bark beetles, thrips, saw flies, sirices, surface caterpillars, winter moths, codlin moths, goat moths, leopard moths, magpie moths, cabbage butterflies, aphides, scale insects, mangel flies, cabbage flies, onion flies, Hessian flies, wheat midges, gout flies, frit flies, celery flies, leather jackets, ox warble flies, sheep's nostril flies, gad flies.

Other pests, outside the class Insecta; such as millepedes, arachnids, eelworms.

The present position of Agricultural Entomology in Britain and other countries, and the remarkable advances which have been made in the study during the last decade.

The entire course of lectures is profusely illustrated by carefully prepared natural specimens, the characters of which are demonstrated to students by the Lecturer. The instruction is further facilitated by an unique set of specially prepared coloured diagrams, from the pencil of Miss Ormerod.

Graduation in Science.[1]

I.—DOCTORATE IN MENTAL SCIENCE.

The Degree of Doctor of Science is open to Candidates highly prepared in the Mental Sciences.

1. The Candidate must be a Graduate, by examination, of a British or a recognised Indian or Colonial University.

2. He must be matriculated in this University for the year in which he appears for Examination or Graduation.

3. He must have attended for at least one academic year in this University, and during that year he must have taken at least two classes on the subjects embraced in the Examination.

4. The Candidate must, in evidence of literary and philosophical culture, send to Professor Calderwood, Convener of the Science Degrees Committee in Mental Science, *at least one month* before proceeding to Examination, a Thesis giving evidence of original research, on a subject in Mental Science approved, *six months before the examination*, by the Science Degrees Committee. Mere compilations will not be accepted. The Candidate can be admitted to examination only after this Thesis has been found satisfactory by the Examiners.

5. The Candidate may then proceed to the Examination, which shall include Logic and Metaphysics, Moral Philosophy, and the History of Philosophy, both Metaphysical and Moral; and the Examination shall (as far as convenient) be combined with the Examination for Honours in Philosophy of the year in which the Candidate desires to pass, and including the books and subjects embraced in that Examination. [Candidates may be tested both orally and by writing.]

6. Those who have taken the Degree of Master of Arts in this University with First-Class Honours in the Department of Mental Philosophy, may obtain the Degree of Doctor in Mental Science when a period of *not less than five years* shall have elapsed after they have obtained such Honours, on submitting a sufficient Thesis, on a subject approved by the Science Degrees Committee, and on giving such other evidence of increased proficiency in the Mental Sciences, by published writings or otherwise, as may be satisfactory to the Senatus.

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[1] No Ordinance has yet appeared instituting or regulating Higher Degrees in Arts, although it is expected that such an Ordinance will be issued before the beginning of next Session. Meanwhile, it may be assumed that, so far as Students presently studying for such Degrees are concerned, the old Regulations will remain in force.

7. The Fee for the Degree of Doctor in Mental Science is £7, 7s.[1] It must be paid at the *Matriculation Office* when the Candidate submits his Thesis. In the event of the Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

II.—DOCTORATE OF SCIENCE IN PHILOLOGY.

The Degree of Doctor of Science is open to Candidates highly proficient in Philology.

1. The Candidate must be a Graduate, by examination, of a British or recognised Indian or Colonial University.

2. He must be matriculated in this University for the year in which he appears for Examination or Graduation.

3. He must have attended for at least one academic year at this University, and during that year he must have taken at least two classes on the subjects embraced in the Examination.

4. The Candidate must send to Professor Calderwood, Convener of the Science Committee in Philology, *at least one month* before proceeding to Examination, a Thesis, giving evidence of original research, on some subject in Philology or Archæology, approved *six months before the examination* by the Science Degrees Committee. Mere compilations will not be accepted. The Candidate can be admitted to examination only after this Thesis has been found satisfactory by the Examiners.

5. The Candidate may then offer himself for Examination in any one of the following branches :—

(1.) *Latin and Greek Languages.* Candidates for the Degree of Doctor of Science in Classical Philology will be tested in respect of their general Scholarship by translation from Latin and Greek Authors, and by composition in Latin and Greek Prose. They will further be required to profess a special knowledge of some Department or Epoch of Classical Literature, or of some three or four of the more difficult and important Classical Writers.

(2.) *Semitic Languages.*

The following are the subjects of Examination for the Degree in this Department :—

(*a.*) Hebrew.—The Books of Samuel, Psalms, Isaiah (with Ibn Ezra's Commentary); Micah, and Proverbs to be known critically. Translation into Hebrew.

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[1] When names are not entered nor fees paid on or before the stated dates, an additional or late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, the Fee paid, and all the necessary Certificates, &c., lodged.

Every candidate, unless a member of the General Council, is required by Act of Parliament to pay the Registration Fee of £1 before graduation.

(*b.*) Syriac.—The Chrestomathy in Nestle's Syriac Grammar. The Biblical Extracts and the Selections from the Chronicle of Bar-Hebraeus and from Ephraem's Hymns in Roediger's Chrestomathia Syriaca. The First Gospel and the Book of Acts (Peshîṭṭâ Version). The Fourth Gospel (Philoxenian Version). Translation into Syriac.

(*c.*) Arabic.—The Ḳor'ân, Sura II. and Arnold's Chrestomathia Arabica, Sections V.-VII. inclusive. Translation into Arabic. Candidates must be acquainted with the Principles of Semitic Comparative Philology as laid down in Wright's "Arabic Grammar," and his Lectures on the Comparative Philology of the Semitic Languages.

(3.) *Sanskrit Language and Comparative Philology.*

(*a.*) Sanskrit Language and Literature. Translation of passages from standard Sanskrit Authors into English, and of passages from English into Sanskrit.

(*b.*) Science of Language, and Comparative Philology of the Indo-European Languages. Acquaintance with the principles of Comparative Linguistic Research, as laid down in the Comparative Grammar of Bopp, Schleicher's "Compendium," and Müller's and Whitney's "Lectures." Candidates must also show some degree of familiarity with Curtius' "Principles of Greek Etymology" (the Introduction); Peile's "Introduction;" Delbrück's "Introduction to the Study of Language;" and Brugmann's "Elements of Comparative Philology."

[The Examinations will be held annually at the close of the Winter Session. Candidates may be tested both orally and by writing.]

6. Those who have taken the Degree of Master of Arts in this University, with First-Class Honours in the Department of Classical Literature, may obtain the Degree of Doctor of Science in Philology, when a period of *not less than five years* shall have elapsed after they have obtained such Honours, after submitting a sufficient Thesis on a subject approved by the Science Degrees Committee, and on giving such other evidence of increased proficiency in Philological Research, by published writings or otherwise, as may be satisfactory to the Senatus.

7. The Fee for the Degree of Doctor of Science in Philology is £7, 7s.[1] It must be paid at the *Matriculation Office* when the Candidate submits his Thesis. In the event of the Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

Monday, 2nd April 1894, at 9 o'clock, is fixed for the commencement of the Examinations of Candidates for the Degree of Doctor in Mental Science, and of Doctor in Philology,—either in Latin and Greek, or in Sanskrit and Comparative Philology. The Examination in Semitic Philology will be held on Wednesday, 4th April 1894, and following days.

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[1] See footnote, p. 547.

HENRY CALDERWOOD, LL.D.,
Convener of Committee.

III.—PURE SCIENCE.

A. — REGULATIONS AND CURRICULA applicable to all who commence attendance on Science Classes after 1st October 1892.

Two Degrees in Science are conferred by the University of Edinburgh, viz.:—Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.). These degrees are given in Pure Science and in Applied Science.

QUALIFICATIONS REQUIRED OF CANDIDATES.

I.—PRELIMINARY EXAMINATION.

The Preliminary Examinations in General Education are held in the Examination Hall in the University.

(*See Time-Table of Examinations, pages* 122 *and* 123.)

All Candidates are required to enter their names *in full* in a book, kept for the purpose at the Matriculation Office, University (Old Buildings), and at the same time to mention the subject or subjects in which they offer themselves for Examination. They are also required to state whether they have before appeared for any Preliminary Examinations at this University. The Fee for the Preliminary Examination is 10s. 6d. for each appearance.

Candidates who intend to present themselves for Examination may obtain Schedules at the Matriculation Office, which must be completed and lodged and the Fees paid at that office not later than 22nd September 1893 and 21st March 1894 for the Autumn and Spring Examinations respectively.

Candidates who cannot attend personally to pay the Fees should transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, and not by cheques on private accounts. When names are not entered nor Fees paid on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. A Candidate is not held to be entered for the Examination until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

1. Candidates before entering on the Curriculum must, unless

exempted, pass a Preliminary Examination in the following subjects:—[1]

1. English.
2. One of the following: — Latin, Greek, French, or German.
3. Mathematics.
4. One of the following:—Latin, Greek, French, or German (if not already taken), Italian, Dynamics.

2. Candidates must pass on the higher standard in Mathematics.
3. *English* includes Grammar and Composition, and the Outlines of Geography and British History, the standard being that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.
4. *Latin* and *Greek* comprise grammatical questions, translations into English from Latin or Greek authors, not previously prescribed, and translations of plain passages or easy sentences from English into Latin or Greek. The standard is that presently adopted for the Lower Grade Leaving Certificate.
5. *French*, *German*, and *Italian* comprise grammatical, literary, and easy philosophical questions, translation into English from French, German, or Italian authors, not previously prescribed, and translations from English into French, German, or Italian. The standard is that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.
6. *Mathematics* comprises (1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., III. (or their equivalents), with easy deductions; Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.
7. *Dynamics* includes Elementary Statics and Kinetics of Solids, Liquids, and Gases.
8. A Candidate must pass in all the required subjects at one or not more than two Examinations. He may repeat his second Examination as often as may be necessary, being examined on each occasion in all the subjects in which he failed, or which he did not profess, at his first. A Candidate's first Examination is held to be the first at which he passes in any of the subjects professed.
9. Attendance on any Science Class shall not qualify for Graduation unless the whole Preliminary Examination has been passed.

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[1] See directions of Joint Board of Examiners, pages 119-121.

II.—DEGREES IN PURE SCIENCE.

1. Candidates for the Degree of Bachelor of Science must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions, and three Summer Sessions), attend at least seven courses of instruction in the subjects included in the Science Examination which they purpose to undergo.
2. Three of these Courses must be in subjects prescribed for the First Science Examination, and four must be in subjects prescribed for the Final Science Examination.
3. Four of the seven Courses must be taken in the University of Edinburgh. The remaining three Courses may be taken at this University or at other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of Graduation in Science, provided that the fees for attendance at an approved Institution or under a recognised teacher in Edinburgh, shall in all cases not be less than the fees exigible for the corresponding Courses in the University of Edinburgh.[1]
4. Every Candidate for a Degree in Science must produce his Matriculation Ticket for the year in which he appears for Examination or Graduation.
5. All Candidates, not Matriculated Students of this University, availing themselves of the permission to attend Lectures at approved Institutions or by recognised teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names at the Matriculation office, paying a fee of the same amount as the Matriculation Fee, and having, in respect of such payment, a right to the use of the University Library.
6. A Student who before October 1892 has completed a part of his course of study with a view to Graduation in Science under regulations in force at the time in this University, and shall thereafter complete his course of study and pass the necessary Examinations in conformity with such regulations, as with those now in force, may become a Candidate for the Degree of Bachelor of Science.
7. Candidates for Graduation who have previously passed the Examinations are required to intimate to the Clerk to the Senatus their intention to graduate, and pay the Registration fee at least ten days before the date of Graduation. Those whose Examinations are not then completed are required to give such intimation at the earliest possible date, and at latest one clear day before the day of Graduation.

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[1] Only Institutions and Teachers with the necessary staff and appliances for Theoretical and Practical Instruction in Science will be recognised by the University. A List of Universities and Institutions at present recognised in terms of this regulation is given on page 552.

UNIVERSITIES AND INSTITUTIONS AT PRESENT RECOGNISED IN TERMS OF REGULATION II. 3.

The Universities of St Andrews, Glasgow, Aberdeen, Oxford, Cambridge, Dublin, and Victoria University, Manchester.

The Glasgow and West of Scotland Technical College; University College, Dundee; University College, London; King's College, London; The Royal College of Science, South Kensington; The Owens College, Manchester; The Mason College, Birmingham; The College of Science, Newcastle-on-Tyne; The Yorkshire College of Science, Leeds; University College, Bristol; University College, Liverpool; The Firth College, Sheffield; University College, Nottingham; The University College of North Wales, Bangor; University College of Wales, Aberystwith; The University College of South Wales and Monmouthshire; The Engineering College, Cooper's Hill.

The Queen's College, Belfast; The Queen's College, Cork; The Queen's College, Galway; The College of Science, Stephen's Green, Dublin; The School of Mines, Dublin.

The Presidency Colleges in Calcutta, Madras, and Bombay. The Thomasson Engineering College, and the Engineering College, Poona.

M'Gill University, Montreal; The University College of Toronto; Queen's University, Kingston, Ontario; The University of Sydney; The University of Melbourne; The University of Adelaide; Wellington College; The University of Otago; Dalhousie College, Halifax, Nova Scotia; Stellenbosch College, South Africa.

The University of Harvard; The University of Yale; The Johns Hopkins University.

The Universities, and Polytechnic Schools supported and regulated or recognised by the governments of the respective Countries of Europe.

EXAMINATIONS.

(A.) DEGREE OF BACHELOR OF SCIENCE.

For the Degree of Bachelor of Science there are two Examinations, conducted by written questions, as well as orally and practically.

(*a.*) *First Science Examination.*

1. The First Examination for the Degree of Bachelor of Science is as to the general knowledge of the Candidate on the following subjects, viz.:—

(i.) Mathematics, or Biology (*i.e.*, Zoology and Botany).
(ii.) Natural Philosophy.
(iii.) Chemistry.

2. The Examination in these subjects is the same as for the ordinary degree of Master of Arts.

3. Candidates may present themselves in any one or more of these subjects at any Examination held after they have attended a full course in the subject or subjects professed.

(*b.*) *Second Science Examination.*

1. The Second B.Sc. Examination is on a higher standard in any three or more of the following subjects :—

(i.) Mathematics.
(ii.) Natural Philosophy.
(iii.) Astronomy.
(iv.) Chemistry.
(v.) Human Anatomy, including Anthropology.
(vi.) Physiology, including Histology.
(vii.) Geology, including Mineralogy.
(viii.) Zoology, including Comparative Anatomy.
(ix.) Botany, including Vegetable Physiology.

2. The standard of this Examination is as nearly as possible equivalent to that of the Examination for the Degree of Master of Arts with Honours, where the subjects are different : and where the subjects are the same the examination is identical.

3. A subject already taken for the First Examination may be taken also for the Second Examination.

4. Candidates presenting themselves for the Second Examination must have attended four full courses of higher instruction, including practical or laboratory work, in the Subjects professed.

5. The Second Science Examination cannot be taken sooner than one year after the Candidate has passed the First Science Examination.

6. If a student, before passing the Preliminary Examination has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for examination, on condition of his passing the full Preliminary Examination within such time as the Senatus may appoint.

7. A Candidate for the degree of Bachelor of Science is not deemed to have attended a class as part of the curriculum for that degree unless he presents a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

8. The Examiners for the degree of Bachelor of Science have power to report that a Candidate has passed with special distinction in one or more of the subjects professed by him : and in such a case a Diploma is given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

9. A Candidate who has passed the First and Second Science Examinations, and otherwise complied with the regulations for Graduation, will be recommended to the Senatus for the Degree of Bachelor of Science.

(B.) DEGREE OF DOCTOR OF SCIENCE.

1. Graduates of this University who have held the Degree of Bachelor of Science for a term of five years may offer themselves for the Degree of Doctor of Science.

2. A Candidate for the Degree of Doctor of Science must profess one of the following branches of Science:—Mathematics, Natural Philosophy, Astronomy, Chemistry, Human Anatomy, including Anthropology, Physiology, including Histology, Geology, including Mineralogy, Zoology, including Comparative Anatomy, Botany, including Vegetable Physiology, and in it he will be expected to show a thorough knowledge.

3. He must submit a Thesis or a published Memoir or Work, to be approved by the Senatus. The Thesis, Memoir, or Work, must be a record of original research undertaken by the Candidate, and must be accompanied by a Declaration, signed by him, that the work has been done and the account of it composed by himself.

The Thesis must be sent to the Convener of the Physical and Natural Science Committee on or before 30th April in the year in which the Candidate proposes to graduate.

The Candidate, if required by the Senatus, must pass such an examination as may from time to time be determined.

OUTLINE OF SUBJECTS OF EXAMINATION.

I.—FIRST EXAMINATION.

(*a*1) MATHEMATICS.

Arithmetic.

Euclid, Books I., II., III., IV., VI., and XI., or their equivalent, with their application to Mensuration.

Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

Candidates must show sufficient knowledge in each of the subjects of Examination.

(*a*2) ZOOLOGY.

(*a*) The General Principles of Biology.

(*b*) The distinctive characters of the Invertebrate groups, and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c*) The distinctive characters of the Chordata groups, and the structure, habits, &c., of Myxine, Raia, Clupea, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d*) The skeletons of Crocodilus, Equus, Felis catus, Balæna, Vespertilio, and Simia (Orang).

(*e*) A general knowledge of the Orders of Sauropsida and Mammalia.

(*f*) The structure and life-history of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g*) The more important facts of the development of Hydra, Amphioxus, Scyllium, Gallus, and Lepus.

(*h*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

(*a2*) BOTANY.

The characteristic features of the following groups and classes of the vegetable kingdoms :—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts of Morphology (including Anatomy, Histology, and Development) and Physiology. The life-history of the following plants :—Bacterium, Saccharomyces, Mucor, Vaucheria, Eurotium, Funaria, Aspidium, Pinus, Scilla, Helianthus, Ulmus; and the characters of plants belonging to the following natural orders of Phanerogamæ :—Coniferæ, Gramineæ, Orchideæ, Liliaceæ, Urticaceæ, Labiatæ, Compositæ, Umbelliferæ, Rosaceæ, Leguminosæ, Cruciferæ, Ranunculaceæ.

(*b*) NATURAL PHILOSOPHY.

Elementary Dynamics.

Experimental Physics.

Candidates must show sufficient knowledge of both subjects.

(*c*) CHEMISTRY.

Classification of Elements. General Laws of Chemical Combination and Action, as illustrated in the simpler compounds of the more commonly occurring elements.

Symbolic Notation.

Preparation and Properties of the Non-Metallic Elements and their chief Compounds. Atomic Theory. Combining Volumes of Gases. Relation of Volume of Gas to Temperature and Pressure.

General Properties of Acids, Bases, and Salts—Electrolysis of Salts.

Oxygen, Ozone, Oxidation and Reduction.

Hydrogen, Water, Peroxide of Hydrogen, Chlorine, Hydrochloric Acid, Hypochlorites, Chlorates, Bromine, Hydrobromic Acid, Iodine, Hydriodic Acid, Iodates, Fluorine, Hydrofluoric Acid. Sulphur, Sulphuretted Hydrogen, Oxides of Sulphur, Sulphites, Sulphates, Thiosulphates, Nitrogen, The Atmosphere, Oxides of Nitrogen, Nitrates, Nitrites, Ammonia, Ammonium Salts, Phosphorus, Oxides of Phosphorus, Chlorides and Oxychloride of Phosphorus, Phosphates, Phosphites, Hypophosphites, Boron, Boracic Acid, Borates, Silicon, Silica, Silicates, Chloride of Silicon, Fluoride of Silicon, Hydrofluosilicic Acid.

Carbon, Oxides of Carbon, Carbonates, Phosgene. Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform.

Methylic and Ethylic Alcohols and Ethers. Methylamine, Dimethylamine, Trimethylamine, Tetramethylammonium. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Products of Distillation of Wood and of Coal. Benzene, Benzoic Acid, Salicylic Acid, Oil of Bitter Almonds, Hydrocyanic Aid, Cyanides, Cyanates, Thiocyanates, Urea.

The following metals, their Oxides, Sulphides, and more important Salts :—Potassium, Sodium, Magnesium, Calcium, Strontium, Barium, Aluminium, Zinc, Manganese, Chromium, Iron, Bismuth, Lead, Copper, Mercury, Silver, Tin, Gold, Platinum, Antimony, Arsenic.

Simple Qualitative Analysis. [*The Examination in Analysis is conducted practically.*]

II. FINAL EXAMINATION.

(*a*) MATHEMATICS.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

(*b*) NATURAL PHILOSOPHY.

Experimental Physics ; Analytical Dynamics and Thermodynamics ; *imperative.*

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

(*c*) ASTRONOMY.

1. The Principles and Practice of astronomically finding the geographical co-ordinates of the place of observation on land and at sea.

2. The Principles that guide the actual determination of the chief astronomical constants—*refraction*, *aberration*, *nutation*, *precession*, and *solar-parallax* in fixed observatories.

3. An account of the methods used for determining the figure and size of the earth.

The Candidate will be required to explain the general principles on which the orbits of planets, etc., are calculated, and must show a thorough knowledge of the methods followed in the case either of a *comet*, *planet*, *double-star*, or of a *meteorite* and a *meteoritic swarm.*

One group of observations must have been made in the field, or at an observatory, and fully reduced so as to show the value of the derived results, and the precautions that have been taken to free them from instrumental and personal errors. Candidates will also be examined as to the best ways of testing the critical parts of instruments, such as a *pivot*, *screw*, *level*, etc.

(*d*) CHEMISTRY.

Inorganic Chemistry.

Organic Chemistry.

Relation between Chemical and Physical Properties.

Complex Qualitative Analysis, Simple Quantitative Determinations, and the preparation of pure reagents. [*This part of the Examination will be conducted practically.*]

(*e*) HUMAN ANATOMY, INCLUDING ANTHROPOLOGY.

Candidates are required to show a competent knowledge of the development of the human body and of its parts and organs; also the position and general arrangement of the different "systems" of organs which enter into its construction, and the structure both of these organs and of the simple tissues. A special knowledge of the locomotory apparatus and of the nervous and vascular systems will be required. It should be understood that an acquaintance with the technical applications of human anatomy to the practice of Medicine and Surgery is not asked for.

The Anthropological part of the subject will embrace a knowledge of race characters as found in the skull and other parts of the skeleton, in the skin, eyes, hair, features, and the external configuration of the body generally. The methods of anthropometrical measurement both of the living body and of the skeleton should be known. The possible influence of use and of external surroundings in producing modifications in the physical characters of man will require attention. An acquaintance with the "types" of mankind and the structural relations of man to the higher mammals will also be expected.

(*f*) ANIMAL PHYSIOLOGY.

The general Chemical Composition of the Animal Body. The Physiology of the Cell. The Structure, Development and Physiology of the Simple Tissues, including Bone and Tooth. The Phenomena of Nutrition, including Food, Insalivation, Digestion, Absorption, Blood, Circulation, Respiration, the Immediate Nutrition of the Tissues, Excretion, the Balance of Nutrition, together with the minute structure of the organs concerned. The Production of Animal Heat and the Regulation of the Temperature of the Body. The Mechanism of Voice and Speech. The Organs of Sense and their Functions. The Special Physiology of the Spinal and Cranial Nerves in Mammals, and of the Brain and Spinal Cord in Man and other Vertebrates, including the Minute Structure of the Spinal Cord, Medulla oblongata and Cortex of the Cerebrum and Cerebellum of a Mammal.

Oral and Practical Examination.—Each Candidate will be examined on any of the above subjects; and he will be required—

1. To examine and describe specimens of Animal Tissues and Organs;

2. To make microscopical preparations of Animal Tissues and Organs;

3. To show his practical acquaintance with the chemistry of Albumin and its Allies, Carbohydrates, Milk, Blood, the Digestive Juices, and their effects, also with the practical chemistry of Bile and Urine;

4. To show his practical acquaintance with the chief Physiological Instruments, and the manner in which they are employed.

5. To show his practical acquaintance with the chief experiments by which Physiological Knowledge has been obtained.

Text-Books recommended. — Foster's "Physiology;" Stirling's "Practical Physiology," and a book on Histology.

(*g*) GEOLOGY, INCLUDING MINERALOGY.

1. *Dynamical Geology.*—The nature and operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy.*—Physical and Chemical characters of the more important and typical species in the various mineral groups—more especially the rock-forming minerals and ores.

3. *Petrology.*—Macroscopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

4. *Structural Geology.*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Stratigraphical Geology.*—The History of the Geological Systems —more especially those of the British Islands.

6. *Palæontological Geology.*—Characters, and distribution in time, of the more important Genera and Orders found fossil in Britain.

7. *Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

(*h.*) ZOOLOGY, INCLUDING COMPARATIVE ANATOMY.

1. A Knowledge of the Systematic Zoology of the Invertebrate and Vertebrate groups.

2. The Elements of the Comparative Anatomy and Development of the Invertebrata and Vertebrata.

3. The Principles of Natural Selection, a Knowledge of the Geographical Distribution of Vertebrate Animals.

The following books are recommended:—Lang's "Text-Book of Comparative Anatomy;" Huxley's "Vertebrata;" Flower and Lyddeker's "Mammalia;" Vogt and Yung's, Practical Zootomy (German or French edition); Darwin's "Origin of Species;" Wallace's "Darwinism" and "Island Life."

(*i*) 1. BOTANY, INCLUDING VEGETABLE PHYSIOLOGY.

1.—MORPHOLOGY.

1. (*a.*) General:—Doctrine of the Cell; its historical development. Structure of the Cell; its forms and patterns. Protoplasm, the nucleus

and nucleolus, plastids. Substances in protoplasm. Forms of cell-formation. Tissues, their kinds and formation. Primary disposition of tissues. Secondary changes in tissues and growth in thickness. Differentiation of the plant into members, the relationships of the members, their development. Branching, its forms. Metamorphosis of members, and the spiral theory. Special features of the flower; its development. Fruits, their forms and development. Buds and their modifications; their development. Hairs. Sporangia and their modifications and development. The Seed, its structure and development. Sexual organs, their forms and development.

(*b.*) Special (1)—The principal facts in the life-history of the following:—Gomphonema, Fuligo, Protococcus, Nostoc, Bacterium, Vaucheria, Pandorina, Pediastrum, Œdogonium, Coleochœte, Spirogyra, Closterium, Chara, Laminaria, Fucus, Polysiphonia, Nemalion, Dudresnaya, Batrachospermum, Corallina, Protomyces, Entyloma, Mucor, Pythium, Saprolegnia, Podosphaera, Eurotium, Penicillium, Polystigma, Xylaria, Claviceps, Ascobolus, Tuber, Saccharomyces, Collema, Usnea, Parmelia, Puccinia, Endophyllum, Agaricus, Phallus, Anthoceros, Radula, Riccia, Marchantia, Sphagnum, Andreæa, Funaria, Polytrichum, Hymenophyllum, Aspidium, Osmunda, Salvinia, Pilularia, Marsilea, Isöetes, Ophioglossum, Marattia, Equisetum, Lycopodium, Selaginella, Cycas, Pinus, Taxus, Avena, Scilla, Dracæna, Orchis, Ulmus, Digitalis, Helianthus, Vicia, Capsella. Details not of obvious significance from the point of view of Comparative Morphology, will not be required.

(2) The flower and fruit characters of the following Natural Orders:—Coniferæ, Cycadaceæ, Gramineæ, Cyperaceæ, Alismaceæ, Aroideæ, Palmæ, Juncaceæ, Liliaceæ, Amaryllideæ, Irideæ, Scitamineæ, Orchideæ, Salicineæ, Cupuliferæ, Urticae, Euphorbiaceæ, Loranthaceæ, Thymeleaceæ, Polygonaceæ, Chenopodiaceæ, Labiatæ, Acanthaceæ, Scrophularineæ, Solanaceæ, Convolvulaceæ, Boragineæ, Polemoniaceæ, Gentianeæ, Asclepiadeæ, Apocynaceæ, Primulaceæ, Ericaceæ, Vacciniaceæ, Campanulaceæ, Compositæ, Dipsaceæ, Valerianeæ, Rubiaceæ, Caprifoliaceæ, Umbelliferæ, Cacteæ, Cucurbitaceæ, Myrtaceæ, Saxifragaceæ, Rosaceæ, Leguminosæ, Sapindaceæ, Rhamneæ, Ilicineæ, Rutaceæ, Geraniaceæ, Lineæ, Tiliaceæ, Malvaceæ, Hypericineæ, Caryophylleæ, Polygaleæ, Violarieæ, Resedaceæ, Cruciferæ, Papaveraceæ, Nymphæaceæ, Berberideæ, Ranunculaceæ.

Candidates will be expected to be able to draw floral diagrams showing the relations of parts of the flowers in those orders, and to be acquainted with the theoretical explanations of the more important anomalous and divergent types belonging to them. This section, 2, will be especially dealt with in the practical examination, and need not form part of the written examination.

2.—TAXONOMY.

Principles of plant classification. The History of its development and the influence upon it of the dogma of the constancy of species, and of descent. The methods associated with the names of—Cesalpino, Ray, Linnaeus, de Jussieu, de Candolle, Brown, Hofmeister, Hooker.

3.—DISTRIBUTION.

The elements which determine distribution and dispersion of plants. The leading facts of geographical distribution. Theories of Insular and mountain Floras. The leading facts of palaeophytology, and their bearing on the theory of descent.

4.—PHYSIOLOGY.

Sustentative function of plants. Materials of plant food, their sources. Absorption of food-material; its synthesis and distribution in the plant. Parasitism. Saprophytism. Metabolism. Vegetable digestion and assimilation. Respiration. Transpiration. Movement of gases and liquids in plants. Growth. Properties of growing parts. Conditions requisite for and affecting growth. Germination. Correlation of growth. Irritability and Contractility of protoplasm. The adaptation of tissues and members to function. Reproductive function of plants; history of the subject. Agamogenesis and Gamogenesis. Embryogeny. Alternation of generations. Apogamy and Parthenogenesis; Apospory. Self and Cross fertilisation and the theory of fertilisation. Hybridism. Variation. Heredity. Special phenomena in flowering plants.

DOCTOR OF SCIENCE EXAMINATION.

I. MATHEMATICS.

The candidate will be required to show very high attainments in two at least of the following subjects:—

1. Pure Geometry, including Modern Geometry and Trigonometry.
2. Analytical Geometry.
3. Algebra, including Higher Algebra and the Theory of Numbers.
4. The Differential and Integral Calculus generally.
5. Special departments, such as the Calculus of Variations, Quaternions, &c.

II. NATURAL PHILOSOPHY.

Candidates who select Physics or Applied Mathematics are required to pass a searching examination in one of the following nine subjects or groups of subjects, and to shew more than a mere elementary knowledge of at least two others:—

(A.) APPLIED MATHEMATICS.

1. *Abstract Dynamics*, including *Kinematics.*
2. *Acoustics* and *Theory of Light.*
3. *Conservation of Energy* including the *Dynamical Theory of Heat.*

4. *Electricity*, including the mathematical theories of *Static and Voltaic Electricity*, *Induction*, *Magnetism*, *and Electro-Magnetism*.

5. *Physical Astronomy*, including the *Lunar and Planetary Theories*, the *Figure of the Earth*, *Precession*, *and Nutation*.

(B.) EXPERIMENTAL PHYSICS.

6. *Properties of Matter.*
7. *Sound and Light.*
8. *Heat and Energy* (generally).
9. *Electricity*, *Magnetism*, &c.

(C.) ASTRONOMY.

1. The Principles and Practice of astronomically finding the geographical co-ordinates of the place of observation on land and at sea.

2. The Principles that guide the actual determination of the chief astronomical constants of *refraction*, *aberration*, *nutation*, *precession*, and *solar-parallax* in fixed observatories.

3. An account of the methods hitherto used for determining the figure and size of the earth.

One group of observations must have been made in the field, or at an observatory, and fully reduced so as to show the value of the derived results, and the precautions that have been taken to free them from instrumental and personal errors. Candidates will also be examined as to the best ways of testing the critical parts of instruments, such as a *pivot*, *screw*, *level*, &c.

III. CHEMISTRY.

The candidate will be required to pass a searching examination in one of the following branches :—

1. The Chemistry and Chemical Technology of Inorganic Bodies, including Metallurgy.
2. Organic Chemistry.

And to shew a thorough practical acquaintance with Chemical Analysis in all its branches, and with the preparation of pure substances.

IV. ZOOLOGY AND COMPARATIVE ANATOMY.

The same subjects as for the Bachelor of Science Examination, along with a competent knowledge of the structure, development, and classification of a special group to be selected by the Candidate and approved by the Examiner.

V. ANIMAL PHYSIOLOGY.

The candidate will be expected to show a thorough knowledge of Human Physiology, together with the Comparative Physiology of the Nervous System. He will also be expected to show an extensive practical knowledge of Histology, Physiological Chemistry, and Experimental Physiology.

VI. BOTANY.

The Candidate will be required to pass a searching examination in one of the following branches :—

1. Morphology.
2. Physiology.
3. Taxonomy and Distribution,

and to show a competent knowledge of the two others. He will be expected to show a thorough practical knowledge of the branch he selects, and will also be examined practically in the other two.

VII. GEOLOGY, INCLUDING PALÆONTOLOGY AND MINERALOGY.

In addition to a more searching test of the knowledge of the subjects prescribed for the Second Bachelor of Science Examination, Candidates will be required to show some acquaintance with the Geology and Palæontology of foreign countries as well as of the British Islands. It will be necessary that they evince sound practical knowledge. To test their acquirements in this respect, they will be asked to identify and describe specimens of minerals, rocks, and fossils placed before them ; and from a geological map, which will be furnished to them, to write a paper (with sections) on the geology of the district to which the map refers.

B.—REGULATIONS FOR GRADUATION IN SCIENCE, applicable to all who commenced attendance on Science Classes before 1st October 1892.

Two Degrees in Science are conferred by the University of Edinburgh, viz. :—Bachelor of Science (B.Sc.), and Doctor of Science (D.Sc.). These Degrees are conferred in Physical and Natural Science, in Engineering, and in Public Health. In Agriculture the Degree of B.Sc. only is conferred. Candidates should apply to Professor Geikie, the Convener of the Science Degrees Committee, for information with reference to these Degrees.

The Degrees in Science are conferred at the Graduation Ceremonials in April and August.

DEGREES OF BACHELOR AND DOCTOR OF SCIENCE IN THE DEPARTMENT OF PHYSICAL AND NATURAL SCIENCE.

PRELIMINARY EXAMINATION.

1. Candidates for Degrees in Physical and Natural Science must, unless exempted, pass a Preliminary Examination in

English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, and Moral Philosophy.

The Preliminary Examinations in General Education are held in the Examination Hall in the University. See Time-Table of Examinations, and Regulations as to Entering for Examination and Payment of Fees, pp. 122, 123, and 581.

The Fee for the Examination or for Registration of qualification is £1, 1s.

EXEMPTIONS FROM THE PRELIMINARY EXAMINATION.

A Degree in Arts in any one of the Universities of the United Kingdom, or in one of the Colonial Universities, or Universities of British India, exempts from the Preliminary Examination.

(*a.*) Bachelors or Masters of Arts, by Examination, of British or recognised Indian or Colonial Universities.

(*b.*) Bachelors or Doctors of Medicine of British or recognised Indian or Colonial Universities.

(*c.*) Holders of two Departmental Certificates in the Faculty of Arts of this University.

(*d.*) Candidates who have passed in this University the Entrance Examination for Curriculum of Three Sessions for Degrees in Arts in Latin, Greek, and Mathematics, are exempted from the Preliminary Examination in Latin, Arithmetic, and Elements of Mathematics, and are held to have passed in Greek and Higher Mathematics as optional subjects.

(*e.*) Matriculated Students of the University of London.

(*f.*) Students who have been admitted by Examination to the Royal Indian Engineering College, Cooper's Hill, and who have obtained 50 per cent. of the marks in Latin or in Greek in the Competitive Examination for entrance to that College. Should such Students not bring evidence of having obtained 50 per cent. in either of these subjects, they will be required to pass the Preliminary Examination in Latin.

(*g.*) Holders of Certificates of having passed the Leaving Examinations of the Universities of Oxford and Cambridge when certified as equivalent to a pass in Responsions at Oxford and the First Examination at Cambridge.

2. Candidates must produce evidence of having passed the Preliminary Examination and of attendance on qualifying Classes embracing all the subjects included in the Science Examination which they purpose to undergo.

3. The attendance on Science Classes for the Degree of Bachelor of Science must extend over three Academic years, one of which must be passed at the University of Edinburgh, the other two years either at this University, or at Universities or Institutions[1] recognised by and approved by this University; Classes of Chemistry, of Practical Chemistry, of Botany, and of Zoology, which are recognised for the First Professional Examination for Degrees in Medicine, are also recognised for the First Bachelor of Science Examination.

4. Each Academic year must be constituted by attendance on Science Classes during at least two full courses during one winter session, or one such course and two full courses during a summer session. Work in a scientific laboratory extending over a period of not less than five months will be reckoned equivalent to a full winter course of lectures, and work in a scientific laboratory extending over a period of three months will be reckoned equivalent to a full summer course of lectures.

EXAMINATIONS.

For the Degree of Bachelor of Science, there are two Examinations conducted by written questions as well as orally and practically.

(*a.*) FIRST BACHELOR OF SCIENCE EXAMINATION.

1. The First Examination for B.Sc. is as to the general knowledge of the Candidate on the following subjects, viz. :—

MATHEMATICS.
NATURAL PHILOSOPHY.
CHEMISTRY.
ZOOLOGY, including COMPARATIVE ANATOMY.
BOTANY.

2. The Examinations are the same as in the corresponding subjects of the First Science Examination under the new Ordinance.

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[1] Only Institutions possessing the necessary staff and appliances for Theoretical and Practical Instruction in Science will be recognised by the University. For Universities and Institutions at present recognised, see p. 552.

3. Masters of Arts who have taken honours in the Natural Sciences after passing the Examinations for M.A. in this University are exempted from the First Bachelor of Science Examination.

4. Holders of departmental certificates in the Department of Mathematics in this University are exempted from Examination in Mathematics and Natural Philosophy.

5. Candidates who have passed the First Professional Examination for Degrees in Medicine in this University are exempted from Examination in Chemistry, Zoology, and Botany.

(*b.*) SECOND BACHELOR OF SCIENCE EXAMINATION.

1. The Second B.Sc. Examination is divided into the following groups, one of which must be professed by the candidate:—

(*a.*) THE MATHEMATICAL SCIENCES, .	Higher Mathematics, Natural Philosophy.
(*b.*) THE PHYSICAL EXPERIMENTAL SCIENCES, ...	Experimental Physics, Chemistry.
(*c.*) THE NATURAL SCIENCES, . .	Zoology, Botany, Physiology, Geology.

2. The Examinations are the same as in the corresponding subjects for the Final Examination in Science under the new Ordinance.

3. Candidates may proceed to the Second B.Sc. Examination at the next periodical Examination after passing the First.

4. Candidates who have passed the First B.Sc. Examination, and have taken Honours in the Department of Mathematics for the Degree of M.A. in this University, are exempted from the Second B.Sc. Examination in the Department of the Mathematical Sciences.

(*c.*) DOCTOR OF SCIENCE EXAMINATION.

1. Candidates may present themselves for the D.Sc. Examination twelve months after passing the Second B.Sc. Examination.

2. A Candidate for the Degree of D.Sc. must profess one of the following branches of Science, viz.: Mathematics, Natural Philosophy, Chemistry, Zoology and Comparative Anatomy, Botany, Animal Physiology, Geology, including Palæontology, and in it he will be expected to show a thorough knowledge.

3. He must submit a Thesis containing either an account of original work done by him, or historical or critical research connected with the special subjects of his Examination. The Thesis must be approved before the candidate is allowed to proceed to Examination.

The Thesis must be sent to the Convener of the Science Degrees Committee on or before 30th April in the year in which the Candidate proposes to graduate.

4. The Degree of D.Sc. will not be conferred on any Candidate who has not completed his 21st year.

5. The Examinations for D.Sc. are the same as in the corresponding subjects for the Degree under the new Regulations.

FEES.[1]

The following are the fees payable for Degrees in Physical and Natural Science—[2]

For the preliminary examination, or for registration of any exempting qualification, . .	£1	1	0
For the First Bachelor of Science examination,	2	2	0
For the Second Bachelor of Science examination,	2	2	0
For the Doctor of Science examination, . .	5	5	0
	£10	10	0

(*See Time-Table of Examinations, pages* 581 *to* 583.)

In the event of a Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

Every Candidate for Graduation is required to pay the Fee of £1 for Registration as a Member of the General Council of the University, at least one clear day before the date of Graduation.

All communications relating to the Curriculum and Examinations for degrees in the department of the Mathematical, Physical, and Natural Sciences, Engineering, Public Health, and Agriculture, and to Exam-

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[1] When names are not entered nor fees paid on or before the stated dates, a late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, all the necessary Certificates, &c., lodged, and the Fee paid.

Every Candidate, unless a member of the General Council, is required before graduation to pay the Fee for Registration of £1, now made compulsory by Act of Parliament.

[2] Candidates should apply for their Diplomas at the Matriculation Office, immediately after obtaining the Degree. There is no additional charge for the Diploma. Any Graduate who cannot apply personally for his Diploma, is required to give written authority to some person to receive and give a receipt for it.

The new Ordinance regulating Graduation in Science in the Department of Engineering was approved by Her Majesty in Council on 30th June 1893, and will come into force on 1st October next. See Appendix, page 18.

8th *July* 1893.

inations for Science Fellowships and Scholarships, &c., should be addressed to *The Convener of the Science Degrees Committee*, at the University, Edinburgh, where the Schedules for Examinations are issued and the Certificates of Candidates examined.

All Examination, Matriculation, and Registration Fees are payable at the *Matriculation Office*, University. When Candidates cannot attend personally to pay the fees, they should transmit them to T. Gilbert by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, and not by cheques on private accounts.

IV.—ENGINEERING.[1]

The Degrees of *Bachelor of Science* and *Doctor of Science* are open to Candidates submitting themselves for examination in Engineering according to the subjoined Rules.

1. Candidates for Degrees in Engineering must, unless exempted, pass a Preliminary Examination in English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, and Moral Philosophy.[1]

2. Candidates must also produce evidence of attendance on qualifying Classes, embracing all the subjects included in the Examination which they purpose to undergo.

3. The attendance on Science Classes for the Degree of Bachelor of Science must extend over three Academic years, one of which must be passed at the University of Edinburgh, the two other years either at this University, or at Universities or Institutions[2] recognised by and approved by this University. Classes of Chemistry, of Practical Chemistry, of Botany, and of Zoology, which are recognised for the First Professional Examination for Degrees in Medicine, are also recognised for the First Bachelor of Science Examination.

4. Each Academic year must be constituted by attendance on Science Classes during at least two full courses during one winter session, or one such course and two full courses during a summer session. Work in a scientific laboratory extending over a period of not less than five months will be reckoned equivalent to a full winter course of lectures, and work in a scientific laboratory extending over a period of three months will be reckoned equivalent to a full summer course of lectures.

5. Every Candidate for a Degree in Science must produce his Matriculation Ticket for the year in which he appears for Examination or Graduation.

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[1] See proposed New Ordinance, which may come into operation on 1st October next, Appendix, page 18.

[2] Only Institutions possessing the necessary staff and appliances for Theoretical and Practical Instruction in Science will be recognised by the University.

A list of Universities and Institutions at present recognised in terms of this regulation is given page 552.

6. Candidates for Graduation who have previously passed the Examinations are required to intimate to the Clerk to the Senatus their intention to Graduate, and pay the fee at least ten days before the date of Graduation. Those whose Examinations are not then completed are required to give such intimation at the earliest possible date, and at latest one clear day before the day of Graduation.

7. There will be two examinations for the Degree of *Bachelor of Science*, and a subsequent examination for the Degree of *Doctor of Science.* The examinations are written, oral, and practical.

8. The first examination is as to the general knowledge of the Candidate on the following subjects, viz. :—

MATHEMATICS.
NATURAL PHILOSOPHY.
CHEMISTRY.

The examination is the same as the first examination in these subjects for Degrees in Pure Science. (See p. 554 and 555).

9. This examination is called the *First Bachelor of Science Examination in Engineering*, and candidates, who have passed the Preliminary, may appear for it at the first period of Examination subsequent to their attendance on the necessary classes. It may be taken at one or two Examinations : (*a*) Mathematics and Physics must be taken together ; (*b*) Chemistry (including Practical Chemistry).

10. Candidates who have passed the *First Bachelor of Science Examination* (or who have been exempted from it), may proceed to the *Second Bachelor of Science Examination* at the next periodical Examination after passing the First.

11. For this Examination each Academic year must be constituted by attendance on Science Classes during at least two full courses during one Winter Session, or one such course and two full courses during a Summer Session.

The Second B.Sc. Examination will be in the following subjects :—

DYNAMICS.
ENGINEERING.
DRAWING.

12. Candidates, after passing the Second Examination, and otherwise complying with the Regulations for Graduation, will be recommended to the Senatus for the Degree of Bachelor of Science on their giving at least one day's notice of their intention to graduate.

13. Candidates who have received the Degree of B.Sc. in the Department of Engineering, and who desire to proceed to the Degree of *Doctor of Science*, may present themselves for examination after the expiry of twelve months from the date of their passing the Second B.Sc. Examination.

The examinations will be conducted by University Examiners, and the special Examiner appointed by the University Court.

The Degree of D.Sc. will not be conferred on any Candidate until he has completed his 21st year.

FIRST EXAMINATION.

OUTLINE OF SUBJECTS OF EXAMINATION.

(*a.*) MATHEMATICS.

(*b.*) NATURAL PHILOSOPHY.

The Examinations in Mathematics and in Natural Philosophy are the same as for First B.Sc. Examination in Pure Science. (See pp. 554 and 555.)

(*c.*) CHEMISTRY—

Same as for First B.Sc. Examination in Pure Science. (See p. 555.)

SECOND EXAMINATION.

(*a.*) DYNAMICS—

The Applications of Mathematics (as far as the Elements of the Differential and Integral Calculus) to

Kinematics.

Statics of Rigid Solids, Elastic and Perfectly Flexible Bodies, and Perfect Fluids.

Attraction.

Kinetics of a Particle, of a Flexible Cord, and of a Rigid Solid.

The Simpler Portions of Kinetics of Perfect Fluids.

(*b.*) ENGINEERING—

Field-Work. — Surveying; Levelling; Setting out of Work; Calculation of Quantities.

Properties of Materials.—General Properties, with special knowledge of their Strength, and the Purposes to which they are applied, and some knowledge of their Cost.

Strength and Stability of Structures Designed by Civil Engineers.—Metal and Timber Bridges and Roofs. Arches in Masonry. Walls. Retaining Walls. Embankments. Cuttings. Breakwaters. Aqueducts. Pipes. Canals.

Strength and Form of the Elements of Machines.

Design of Combined Structures.—An elementary knowledge of the Design of Bridges and Roofs, of Reservoirs, Embankments, collecting and distributing Machinery of Waterworks, and of the main features of Railway construction, Harbours, and Drainage.

Design of Machinery.—An elementary knowledge of the construction of the Steam Engine, stationary and locomotive, of Prime Movers driven by Water, of Mill-wright work, and the general arrangement of Workshops and Factories.

Prime Movers.—Theory of Heat Engine. The Hot Air Engine. The Steam Engine. The Gas Engine. Turbines and Water Wheels. *Power Transmission*—Telodynamic, Hydraulic. Electric.

(*c.*) DRAWING—

Candidates must exhibit a good knowledge of Geometrical Drawing, and be able to represent neatly, in the usual manner employed by engineers, Plans and Sections of Buildings and Machinery, and also to make Engineering Sketches with figured dimensions from actual objects.

DOCTOR OF SCIENCE EXAMINATIONS.

1. Every candidate for this Degree must have been engaged for at least two years under an engineer in actual practice. He will be examined in one, and not more than one, of the sub-divisions in each of the two following groups of subjects :—

I.—PRACTICAL ENGINEERING,	(*a.*) The design of Machinery, with complete Drawings, Specifications and Estimates.
	(*b.*) The preparation of Designs, Specifications, and Estimates for Civil Engineering work.
II.—APPLIED SCIENCE, . .	(*a.*) Applied Mathematics.
	(*b.*) Technological Chemistry.
	(*c.*) Geology.
	(*d.*) One Branch of Natural Philosophy.
	(*e.*) Telegraphy.

2. The class of machinery, or the particular engineering work on which the student is examined, will be chosen with reference to the character of the work upon which he has been specially engaged.

3. Candidates will be tested as regards their knowledge of the subjects of Group I. by their being required to submit, as their own work, a complete set of drawings, specifications, and estimates for some proposed project or piece of machinery, for the preparation of which a month or five weeks will be allowed.

These drawings, &c., together with the detailed calculations upon which they have been based, will be sent in to the Examiners ; and on their being approved, the candidate will be subjected to a searching examination for the purpose of verifying the authenticity of the work submitted, and of ascertaining the sufficiency of the candidate's professional ability.

4. A high degree of proficiency will be required from the candidate.

V.—PUBLIC HEALTH.

Two Degrees in Science in the Department of Public Health are conferred by the University of Edinburgh, viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

I. BACHELOR OF SCIENCE.

1. Every Candidate for Graduation in Science in the Department of Public Health must be a Graduate in Medicine of a University of the United Kingdom, or of a Colonial, Indian, or Foreign University specially recognised by the University Court.

2. Every Candidate must be matriculated for the year in which he appears for examination or graduation.

3. There are two Examinations for the Degree of Bachelor of Science in the Department of Public Health.

4. Every Candidate who desires to proceed to the first examination for the said Degree must produce evidence—(*a*) that he has taken a Degree in Medicine in the University of Edinburgh, or in a University recognised under section 1 hereof; (*b*) that he has worked for at least six months, or the usual winter session, in a Laboratory where practical instruction is given in the methods of investigating subjects pertaining to Public Health. This course must be attended, after Graduation in Medicine, either in the Public Health Laboratory of the University of Edinburgh, or in a Laboratory in which instruction in Public Health is given, and which has, after due enquiry, been recognised by the University Court.[1]

5. Laboratories are not recognised for the purpose referred to in section 4 (*b*), in which provision is not made for the teaching of Public Health Laboratory work in accordance with the Schedule of Laboratory work issued by the Senatus, as provided in section 10 hereof, nor will they be recognised if such work is not taught by a specially recognised teacher.

6. Candidates shall not be admitted to the Second Examination for the said Degree until one year after taking a Degree in Medicine, nor until an interval of at least three months has elapsed after passing the First Examination.

7. Every Certificate of Laboratory attendance must bear that the

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[1] *Public Health Laboratories and Teachers recognised under this section :—*

Public Health Laboratory of University College, Dundee,	E. Percy F. Frankland, Ph.D., 16 February 1891.
Liverpool School of Science and Technology,	George Tate, Ph.D. 15 June 1891.
King's College, London, ...	W. R. Smith, M.D., D.Sc., November 1891.
University of Aberdeen, ...	Professor Matthew Hay, M.D. 15 February 1892.

Candidate worked during his period of attendance for at least fifteen hours per week.

8. Every Candidate who desires to proceed to the second examination for the said Degree must produce evidence—(*a*) that he has attended in this University at least two courses of instruction on subjects included in the Examinations set forth in section 10 hereof; (*b*) that he has attended a course of lectures in which instruction is given in Public Health; and (*c*) that after having obtained a Registrable Qualification in Medicine, he has practically studied the duties of Out-door Sanitary work under the Medical Officer of Health of a county or of a large urban district for a period of not less than six months.[1]

9. The subjects of the Examinations for the Degree of Bachelor of Science in the Department of Public Health shall be as follows:—

(*a*) For the First Examination:—1. Laboratory work. The Examination in this department is conducted practically, and by a Written Examination in which the Candidate shall be required to explain the rationale of the investigations contained in the schedule of Laboratory work referred to below. There is also an Oral Examination. 2. Elements of Experimental Physics. The Examination in this Department is conducted by means of written papers, followed by an Oral Examination.

(*b*) For the Second Examination:—1. Medicine in its application to Public Health. 2. Practical Sanitation. 3. Sanitary Law and Vital Statistics. 4. Mensuration and Drawing.

The Examinations in these departments are conducted by means of written papers, and also as far as possible practically; and an Oral Examination in each department is held after the Written Examinations.

10. Detailed Schedules of the subjects of Examination in each department named in section 10 will be issued from time to time by authority of the Senatus.

SCHEDULES OF THE SUBJECTS OF EXAMINATION.

LABORATORY WORK.

(1.) *Examination of Water.*—Physical Properties, Chemical Properties, Microscopical Appearances, Pollution of Potable Waters.

(2.) *Examination of Air.*—Temperature, Pressure, Humidity; Carbonic Acid, Ozone, Micro-organisms, Organic Matter, Noxious Emanations.

(3.) *Examination of Foods.*—Milk, Butter, Butterine, or Oleomargarine, Flour, Bread, Starchy foods, Sugar, Honey, Butcher meat, Fish, Vegetables.

(4.) *Examination of Beverages.*—Tea, Coffee, Cocoa, Alcoholic Beverages, Aërated Waters.

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[1] Requirement (*c*) does not in the meantime apply to any Candidate who had obtained a Registrable Qualification on or before 1st January 1890.

(5.) *Examination of Condiments.*—Salt, Pepper, Mustard, Vinegar, and Preserves; Examination of Lime Juice. Nutritive Value of Dietaries.

(6.) *Sewage.*—Examination of sewage and of effluents after treatment.

(7.) *Soils.*—Temperature, Humidity, Permeability, Chemical Composition, Gases of the Soil, Micro-organisms.

(8.) *Disinfectants and Deodorisers.*—Chemical Examination of the Materials, Determination of their comparative power.

(9.) *Building Materials.*—Chemical and Physical Properties.

(10.) *Clothing.*—Physical Properties of Clothing Materials.

(11.) *Bacteriology.*—Micro-organisms in relation to Epidemic and other Diseases.

PHYSICS.

(1.) *Laws of Motion and Properties of Matter.*—Elasticity, Density, Porosity, Divisibility, Viscosity, &c.

(2.) Elements of Dynamics of Solid and Fluid Bodies.

(3.) Elementary Experimental Facts regarding Energy in the common phenomena of Sound, Light, Heat, Electricity, and Magnetism.

(4.) *Elements of Astronomy.*—Causes of Tides, Eclipses, Aberration, Precession, &c.

MEDICINE IN ITS APPLICATION TO PUBLIC HEALTH.

The General Pathology of Endemic, Epidemic, and other morbid Processes induced by Environment.

The Causes, Clinical History, Diagnosis, Prognosis, and Prevention of Endemic and Epidemic Diseases, as well as of the Epizootics which affect Man; of the Contagious or Infectious Diseases; and of those incidental to particular trades, or otherwise produced by the surroundings of the patient.

PRACTICAL SANITATION.

(1.) *Site and Environment of Dwellings.*—Influence of Position, Aspect, and Climate; Meteorological and Geological Conditions; Soil and Drainage.

(2.) *Water Supply.*—Quantity per head; Relative Eligibility of available Sources of Supply; Estimation of yield; Methods of utilising various Sources of Supply; Storage, Subsidence, and Filtration; Distribution—(α) General, (β) Domestic; Causes, Detection, and Treatment of contaminated Supply.

(3.) *Air Supply.*—Quantity and Temperature, with knowledge of use of instruments employed in their Measurement; Causes and Detection of Impurities; Warming and Ventilation; Characteristics and Fitness of various methods in use.

(4.) *Excreta, Refuse, and Sewage.*—Character and Quantity of in (α) Urban, (β) Rural Districts—

A. Collection and Removal from (1) the Dwelling, (2) the Town or Village; Nature, Practical details, and maintenance of the several methods employed.

B. Disposal: (1) Sanitary, (2) Insanitary methods; Precipitation, Filtration, Irrigation, Discharge; Design and details of necessary works.

(5.) *General Structural and Mechanical Details of Sanitary Works.*—Character, Fitness, and Qualities of Materials (Brick, Cement, Earthenware, Iron, Lead); Design, setting out, and laying of Sewers; Plumbing and Iron-work.

(6.) *Hospitals.*—Principles of Design and Construction.

(7.) *Infectious and Epidemic Diseases.*—Origin, Modes of Propagation, and Means of Prevention; Epizootics.

(8.) *Disinfectants.*—Selection and application.

(9.) *Effects of Insanitary Conditions.*—Insufficient house accommodation, Vitiation of Air, Impure Water, Bad or insufficient Food.

(10.) *Unhealthy Occupations.*—Means of mitigating or removing their unhealthiness.

(11.) *Nuisances.*—Urban, Rural, and Domestic.

(12.) *Disposal of the Dead.*—Burial, Cremation.

(13.) Examination of, and report on, the sanitary condition of a dwelling or locality.

SANITARY LAW.[1]

Sanitary Administration. Laws affecting Factories, Workshops, Mines, Common Lodging-houses, Removal of Refuse, Nuisances, Rivers Pollution, Alkali Works, Burial Grounds, Unwholesome Food, Adulteration of Food and Drugs. Sale of Poisons.

VITAL STATISTICS.

Leading facts as regards Population, Birth and Death Rates, Distribution of Diseases.

MENSURATION AND DRAWING.

Computation of Areas and Volume; Scales; Elements of Orthographic and Isometric Projection; Figured or dimensioned sketches; Preparation and interpretation of contoured Maps, Plans, and Working Drawings.

II. DOCTOR OF SCIENCE.

11. Bachelors of Science in the Department of Public Health may, after the lapse of one year, proceed to the Degree of Doctor in the same Department, on producing evidence that they have been engaged in Practical Sanitation since they took the said Degree of Bachelor of Science, and on presenting a Thesis on some subject in the Department of Public Health. Every such Thesis must be certified by the Candidate to have been composed by himself, and must be approved of by the Examiners.

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[1] A knowledge of the Sanitary Law of any part of the British Dominions will be sufficient.

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The new Ordinance regulating Graduation in Science in the Department of Agriculture was approved by Her Majesty in Council on [illegible] June [illegible], and will come into force on [illegible] October next. See Appendix, page [illegible].

[illegible]

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12. Every Candidate for the Degree of Doctor of Science in the Department of Public Health must lodge his Thesis with the Convener of the Science Degrees Committee of Senatus on or before the 30th April in the year in which he intends to graduate.

13. No Thesis will be approved which does not contain either the results of original observations on some subject embraced in the Examination for the said Degree of Bachelor of Science, or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied for the purpose of verification, by precise references to the publications quoted.

VI.—AGRICULTURE.[1]

1. In the Department of Agriculture the Degree of Bachelor of Science is the only Degree conferred.

2. The Rules as to the Preliminary Examination on subjects of General Education are the same as those for Graduation in the Department of Engineering. See page 567.

. The Rules as to attendance on qualifying Classes for three Sessions
the same as those for Graduation in the Department of Engineer-
see page 567 ; provided always (1.) that instead of one of such
e years of attendance, a year may be spent on a Farm or Farms
ursuance of the practical study of Agriculture ; (2.) That in the case
ny subject in the Department of Agriculture, which is not taught
he University, attendance may be given at an Institution specially
nised by the University Court for purposes connected with Gradua-
in Science in that Department only ;[2] and (3.) That, in the case of
cultural Chemistry, attendance may be given on a course of Instruc-
hereon by any teacher of Chemistry who is recognised under the
lations for Graduation in Medicine.

Each Candidate must produce a Certificate of attendance upon a
lifying Class on each subject of Examination ; and should he, instead
e of the three years of attendance on Classes required in Section
ve spent a year in the practical study of Agriculture, he must
uce a Certificate to that effect.

There are two Examinations for the Degree of Bachelor of
e in the Department of Agriculture. These Examinations are
en, Oral, and Practical.

6. The first Examination is in :—[3]

   (1.) AGRICULTURE, to such an extent as may from time to time be fixed by the Senatus.

   (2.) CHEMISTRY, to the extent required for the First Examination for the Degree in Pure Science.

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[1] See proposed New Ordinance, which may come into operation on 1st October next, Appendix, page 22.

[2] The Institutions recognised for this purpose are :—The Royal Agricultural College, Cirencester ; The College of Agriculture, Downton ; The University College, North Wales, Bangor ; and The Veterinary Colleges of the United Kingdom.

[3] This Examination may be taken at one period or in two divisions at separate periods.

(3.) BIOLOGY:—(*a*) BOTANY, or (*b*) NATURAL HISTORY, either subject, at the option of each Candidate.

In either case the Examination shall be to the extent required for the First Examination in these subjects for the Degree in Pure Science.

(4.) GEOLOGY, in so far as bearing on Agricultural Science.

(5.) ECONOMIC SCIENCE, to such extent as may from time to time be fixed by the Senatus.

7. Candidates who have passed the First Examination may present themselves at the end of six months for the Second Examination.

8. The Second Examination is in:—[1]

(1.) AGRICULTURE and RURAL ECONOMY.

(2.) CHEMISTRY, as applied to Agriculture.

(3.) VETERINARY HYGIENE, to such extent as may from time to time be fixed by the Senatus.

(4.) ENGINEERING, to such extent as may from time to time be fixed by the Senatus.

9. Candidates who have passed the Second Examination will be recommended to the Senatus for the Degree of Bachelor of Science.

10. The Examinations are conducted by University Examiners appointed by the University Court, and an additional Examiner in Agriculture, to be appointed by the University Court, after communicating with the Council on Education of the Highland and Agricultural Society of Scotland, and considering any recommendation by them.

OUTLINE OF SUBJECTS OF EXAMINATIONS.

FIRST BACHELOR OF SCIENCE EXAMINATION.

I. AGRICULTURE: ITS SCIENTIFIC PRACTICE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.

2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the different Methods of Management.

3. *Drainage.* — Its Practice and Advantages — Irrigation—Wet-Warping — Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.

4. *Implements and Machines of the Farm.*—The Importance of their proper Construction and Careful Management.

5. *Steam Cultivation.*—Its Advantages and Disadvantages.

6. *The Motive Powers Employed on the Farm.*—1st, Man; 2d, Horse; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.

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[1] See note 3, page 575.

7. *Farm Servants.*—Their Labour and Wages — Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.

8. *The Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (Grain, Root, Forage, and Hay Crops).—Their Selection and Growth—Prevention of Insect Injuries and Diseases.

10. *Identification of Grasses and other Valuable Pasture Plants.*—Character and Habits of those of importance—Detection of Adulterations—Regulations necessary to protect the Farmer in buying Seeds.

11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures* and Means of Destroying them.

13. *Silage and the System of Ensilage.*—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.

14. *Manures.*—Farm-yard Manure — its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials — their Uses, Abuses, and Adulterations — the proper Times and Methods of their Application. The Value and Use of Liquid Manure and Town Sewage.

15. *Buildings and Fences.*—The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage of Houses and Farm-yards.

2. CHEMISTRY.

3. BOTANY.

4. NATURAL HISTORY.

The Examinations in Chemistry, Botany, and Natural History are the same as for the First B.Sc. in Pure Science (p. 555).

5. GEOLOGY AS BEARING ON AGRICULTURE.

(1.) *Physical Geography and Dynamical Geology.*—The nature and operation of Geological agents :—Rain, Underground Water, Rivers, Ice, the Sea, Life, Earthquakes, Volcanoes, Movements of Upheaval and Depression.

(2.) *Mineralogical and Petrological Geology.*—Characters of the principal Rock-forming Minerals : Composition, Origin, and Distribution of the more important and commonly occurring Rocks.

(3.) *Structural Geology.*—The Structure of Rock-masses, more especially Bedding, Joints, Faults, and Denudation.

(4.) *Agricultural Geology.*—Nature and Origin of Soils and Subsoils : Draining in connection with Geological Structure ; Mineral substances used as Manures.

6. ECONOMIC SCIENCE AS APPLIED TO AGRICULTURE.

1. The Food Supply of the United Kingdom. 2. The Wages of Agricultural Labour. 3. The Profits of the Farmer. 4. The Rent of

Land and Causes of Variations in Rent. 5. Contracts for the Hire of Land. 6. The Risks of Long Leases. 7. Compensation for Improvements. 8. Fixity of Tenure and its Effects. 9. The Prices of Agricultural Produce. 10. Foreign Competition. 11. Effects of the Appreciation of Gold and the Depreciation of Silver. 12. Effects of various Imperial and Local Taxes on Agriculture.

SECOND BACHELOR OF SCIENCE EXAMINATION.

1. AGRICULTURE AS FOR FIRST B.SC. AND THE FOLLOWING—

(1.) *Live-Stock, embracing Cattle, Pigs, Horses, Sheep*—The Various Breeds of each, and suitability of some to Local Conditions—"The Principles of Breeding." Feeding and Management—Cost of Feeding—Proper Mixtures of Food to Use. Cost of the Production of a Stone of Beef, Mutton, and Pork, showing the Amount of Profit in each Case.

(2.) *Dairying in all its Branches*, including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale or Manufacture into Cheese, Butter, &c.

(3.) *Feeding Stuffs*—Suitability of the Common Food Substances to the Different Classes of Farm Stock—The Purchase, Storing, and Administration of the same—their Manurial Residues.

2. AGRICULTURAL CHEMISTRY.

1. *Soil.*—Origin—Chemical and Physical Characters—Composition and Improvement of Soil—Functions of Soil.

2. *Plants.*—Constituents of Plants: Organic, Inorganic, and Proximate. Composition of Ash. Changes which take place during Plant Growth. Plant Food and its Sources.

3. *Manures.*—General Principles of Manuring. Composition and Nature of general and special Manures. Valuation and Adulteration of Manures. Valuation of Unexhausted Manure in Soils.

4. *Crops.*—Rotation. Cereal Crops. Leguminous Crops. Forage Crops. Root and Tuber Crops. Crop Residues.

5. *Live Stock.*—Animal Nutrition. Constituents of Animals. Foods, Destination of Food. Digestibility and Comparative Nutritive Value of Foods. Water. Animals as Producers of Food and Manure.

6. *The Dairy.*—Constituents and Properties of Milk, Cream, Butter, Cheese, and minor products. Adulterations and Modes of Detection.

3. VETERINARY HYGIENE.

1. The Comparative Osteology (rudimentary) of the Horse, Ox, and Sheep.

2. The Physiology of Dentition in Horse, Ox, Sheep, and Pig, more especially as indicative of the Age of the Animal.

3. The Physiology of Gestation; the Diseases incidental to the pregnant state, and also those consequent to the act of parturition.

4. Description of the Digestive Organs of the Horse, Ox, and Sheep (separately), also their Physiology, and most ordinary Diseases.

5. Contagious and other Diseases of Farm Stock. Prevention and Treatment of Diseases.

4. ENGINEERING.

1. *Engineering Field Work.*—Surveying, with special reference to Estate and Parish Surveying, Levelling, Plotting of Surveys and Sections, Calculation of Quantities.

2. *Mechanics.*—(*a*) Principles of Statics; couples; moments of forces; parallel and inclined forces; centre of gravity; moments of inertia; friction. (*b*) Principles of Kinematics and Kinetics; Newton's laws of motion; Conservation and transformation of energy.

3. *Strength and Properties of Structural Materials*, including their fitness and adaptability, together with some knowledge of their cost.

4. *Strength and Stability of Structures.*—General knowledge of the design, construction, and maintenance of Roads, Roofs, Bridges, Embankments, Retaining Walls, Aqueducts, and General Buildings.

5. *Hydraulics.*—The laws governing the flow of water in open and closed channels, and its discharge through orifices; Systems of Drainage and Irrigation; Pumps, &c.

6. *Mechanism and Machinery.*—General Principles and means of transmission, conversion, and modification of motion; general millwright work with special reference to the machines ordinarily employed for agricultural purposes.

7. *Prime Movers.*—A knowledge of the sources and modes of estimating power; The Steam Engine; Pneumatic Machines; Hydraulic Motors, Water-wheels, Turbines, &c.

FEES.[1]

1. PRELIMINARY EXAMINATION—

The fee for the Preliminary Examination is 10s. 6d. for each appearance.

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[1] When names are not entered nor fees paid on or before the stated dates, a late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, all the necessary Certificates, &c., lodged, and the Fee paid.

Every Candidate, unless a member of the General Council, is required before graduation to pay the Fee for Registration of £1, now made compulsory by Act of Parliament.

2. EXAMINATION FOR DEGREES—[1]

(1) *Pure Science—*

First B.Sc. Examination, ... (or for each subject, £1, 1s.).	£3	3	0
Second B.Sc. Examination, ...	2	2	0
Doctor of Science, ...	7	7	0
	£12	12	0

(2) *Engineering—*

For the preliminary examination, or for registration of any exempting qualification, .	£1	1	0
For the First Bachelor of Science examination,	2	2	0
For the Second Bachelor of Science examination,	2	2	0
For the Doctor of Science examination, . .	5	5	0
	£10	10	0

(3) *Public Health—*

For the First Examination for the Degree of Bachelor, ...	£5	5	0
For the Second do. do.,	5	5	0
For the Degree of Doctor, ...	5	5	0
	£15	15	0

(4) *Agriculture—*

For the Preliminary Examination, or for Registration of any exempting Qualification, .	£1	1	0
For the First Bachelor of Science Examination	2	2	0
For the Second do. do.	2	2	0
	£5	5	0

In the event of a Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

Every Candidate for Graduation is required to pay the Fee of £1 for Registration as a Member of the General Council of the University, at least one clear day before the date of Graduation.

All communications relating to the Curriculum and Examinations for degrees in Science, and to Examinations for Science Fellowships and Scholarships, &c., should be addressed to *The Convener of the Science Degrees Committee*, University, Edinburgh.

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[1] Candidates should apply for their Diplomas at the Matriculation Office, immediately after obtaining the Degree. There is no additional charge for the Diploma. Any Graduate who cannot apply personally for his Diploma, is required to give written authority to some person to receive and give a receipt for it.

All Examination, Matriculation, and Registration Fees are payable at the *Matriculation Office*, University. When Candidates cannot attend personally to pay the fees, they should transmit them to T. Gilbert, by *Post Office* or *Postal Orders*, or by *Bank Drafts only*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, and not by cheques on private accounts.

V.—TIME-TABLE OF EXAMINATIONS AND DATES FOR PRESENTING CERTIFICATES AND PAYMENT OF FEES.[1]

PRELIMINARY EXAMINATION.

(*See Time-Table of Examinations, pages* 122 *and* 123.)

Names to be given in and Fees paid not later than 22nd September 1893, and 21st March 1894, for the Examinations in Autumn and Spring respectively.

FIRST SCIENCE EXAMINATION.[1]

PRACTICAL CHEMISTRY, 15th July 1893, and 24th March 1894, and following days, at hours to be announced.

CHEMISTRY, 17th July, and 26th March, at 10 A.M. each day.

BOTANY, 17th July, and 26th March, at 1 P.M. each day.

LABORATORY WORK (Public Health), 17th July, and 26th March, at 10 each day.

PHYSICS (Public Health), 17th July, and 26th March, 1 each day.

PRACTICAL WORK, in the Laboratory begins, 18th and 27th March.

ZOOLOGY, 18th July, and 27th March, 10 each day.

Oral Examinations begin 18th July and 27th March.

AGRICULTURE, 11th October 1893, and 2nd April 1894, 9-12 each day.

GEOLOGY (Agriculture), 18th July and 27th March, at 1 each day.

ECONOMICS (Agriculture), 11th October 1893, and 2nd April 1894, 2.30-4.30 each day.

MATHEMATICS, 12th October, and 6th April, 9-11, and 11.30-1.30 each day.

NATURAL PHILOSOPHY, 12th October, 2.30-4.30, and 13th October, 9-11; 6th April, 3-5, and 7th April, 9-11.

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[1] See footnote 1, page 579.

Names to be given in, Certificates shown, and Fees paid not later than 8th July, 3rd October, and 19th March, for the Examinations in July, October, and April respectively.

FINAL EXAMINATION.[1]

After 1893 *there will be only one Final Science Examination in the year. The Examinations for Degrees in Pure Science, in Engineering, and in Agriculture, will take place annually at the end of the Winter Session, and the Examinations for Degrees in Public Health will take place annually in July.*

MATHEMATICS, 6th April, 9-12 and 2-5, and 7th April, 9-12.
NATURAL PHILOSOPHY, 7th April, 1-4, and 9th April, 9-12 and 1-4.
ASTRONOMY, 29th March, 11.30-1.30, and 2.30-4.30.
CHEMISTRY, 17th July 1893, and 26th March 1894, 10 and 1 each day.
HUMAN ANATOMY, including Anthropology, 30th March, 10.
PHYSIOLOGY, 19th July 1893, and 30th March 1894, 1 each day.
GEOLOGY, including Mineralogy, 18th July 1893, and 27th March 1894, at 1.
ZOOLOGY, including Comparative Anatomy, 18th July 1893, and 27th March 1894, 10.
BOTANY, including Vegetable Physiology, 17th July 1893, and 26th March 1894, 1.
ENGINEERING and DRAWING, 7th and 8th November 1893, at 11 A.M. and 2 P.M. each day, and 9th November, 10 A.M. and 2 P.M.; and 2nd and 3rd April 1894, at 9 and 1 each day, and on 4th April at 10 and 2.
DYNAMICS (Engineering), 6th November 1893, and 6th April 1894, 9 each day.
MEDICINE (Public Health), 3rd July, 10.
SANITARY LAW and VITAL STATISTICS (Public Health), 3rd July, 1.
PRACTICAL SANITATION and DRAWING (Public Health), 4th July, 10 and 1.
Oral Examination, 5th and 6th July.

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[1] See footnote 1, page 579.

AGRICULTURE, 11th October 1893, and 2nd April 1894, 9-12 each day.

CHEMISTRY (Agricultural), 12th October 1893, 9-11; and 27th March 1894, 10-12.

VETERINARY HYGIENE, 12th October 1893, 11.30-1.30, and 27th March 1894, 1-3.

ENGINEERING (Agriculture), 9th October 1893, and 3rd April 1894, 9-12 each day.

Names to be given in, Certificates shown, and Fees paid not later than 26th June (Public Health), 8th July, 3rd and 27th October, and 19th March, for the Examinations in July, October, November, and March respectively.

D.Sc. Candidates are required to lodge their Theses and proof of their eligibility with the Convener of the Science Degrees Committee at the Matriculation Office, and to pay the Fees on or before 30th April of the year in which they propose to graduate. See pages 566 and 580 as to payment of Fees.

Examination Papers for Degrees in Science.

PRELIMINARY EXAMINATION.

[*For Papers in the Preliminary Subjects, see Papers for Preliminary Examination for Degrees in Arts and Science. For Papers under Old Regulations, see Preliminary Examination Papers for Degrees in Medicine.*]

FIRST SCIENCE EXAMINATION.

[*For Papers in Mathematics and Natural Philosophy see Papers in these Subjects for the Degree of M.A.; and for Papers in Chemistry, Botany, and Zoology see Papers for First Professional Examination for Degrees in Medicine.*]

Department of Public Health.

LABORATORY WORK.

25*th July* 1892—10 *to* 12 *o'clock.*

1. Describe a method for the determination of the number of micro-organisms in a given volume of atmospheric air.

2. Suggest a method for the quantitative estimation of the non-albuminoid nitrogenous matter in Tea.

3. How would you quantitatively determine the magnesia in a sample of water which also contained calcium salts?

Monday, 20th March 1893.—10 *to* 12 *o'clock.*

1. Describe a method for the quantitative determination of oxygen dissolved in a sample of potable water.

2. How are micro-organisms classified in relation to their development in oxygen? Describe a method for the cultivation of anærobic organisms.

3. What is a normal solution? How much by weight of—
   (1) Oxalic Acid,
   (2) Butyric Acid,
are 20 cc. of a decinormal solution of Caustic Potash equivalent to?

PRACTICAL WORK.

The following are examples of what were given at this Examination :—

(*This part of the Examination lasts four days.*)

1. Quantitative analysis of infants' food.
2. Quantitative analysis of effluent from a Sewage Farm.
3. Bacteriological examination of samples of potable water.

PHYSICS.

Monday, 25th July 1892.—1 *to* 3 *o'clock.*

1. Define the terms *velocity*, *acceleration*, *momentum*, *force*. Explain how force is measured (1) in gravitation units, (2) in absolute units.

2. Assuming that the free surface of water in a capillary tube is concave, explain, upon hydrostatic principles, the rise of water in the tube.

3. Explain the term *viscosity* as a property of fluids. How do its dimensions differ from the dimensions of *rigidity* in solids?

4. Explain how the properties of a gas may be represented graphically, and illustrate the method by drawing the isothermals for carbonic acid gas.

5. Define the *specific heat* of a substance at any temperature, and the *mean thermal capacity* of a body between two temperatures.

6. Distinguish between conduction and convection of heat, and give illustrations of both processes.

7. A long-sighted person is unable to see objects distinctly at any distance less than 60 inches. To what extent will his range of vision be extended by a convex lens of 20 inches focal length?

8. Describe accurately the phenomenon of double refraction. How has it been explained?

9. Explain how the moon's altitude is affected by parallax and by terrestrial refraction.

10. If a wire, stretched with a tension of four pounds weight, sounds

a certain musical note, with what tension must it be stretched to give a note of double the pitch?

11. Describe a method of comparing the magnetic moments of two magnets.

12. State Ohm's law.

A galvanometer has a resistance of 100 ohms; calculate the resistance of the wire which will shunt off nine-tenths of the main current from the galvanometer.

Monday, 20*th March* 1893.—1 *to* 3 *o'clock.*

1. How do we measure the momentum and kinetic energy of a moving mass? An engine of 10 tons is moving with a speed of 20 miles per hour, and a cannon ball of 30 lbs. with a speed of 500 feet per second. Compare their momenta and kinetic energies.

2. Distinguish between mass and weight; and describe an experiment which proves that the one is proportional to the other.

3. Assuming that the surface of mercury in a capillary tube is convex, explain, on hydrostatic principles, the depression of the mercury in the tube.

4. Define *viscosity*, and explain its nature. Show that it exists in gases, in liquids, and in solids.

5. Contrast the properties of a gas, of a vapour, and of a saturated vapour, and illustrate graphically by means of a Watt's diagram.

6. An object is viewed through a convex lens. Explain when the image is real and when virtual, and sketch in each case the course of the rays from any point of the object to the eye.

7. Describe the spectra of incandescent gases, of liquids, and of solids respectively. Describe the solar spectrum, and explain how it is formed.

8. Define specific heat, and describe accurately any means of determining experimentally the specific heat of a liquid.

9. Explain the terms electromotive force, intensity of current, and resistance, and give the law connecting them. Through what resistance can an electromotive force of 40 volts sustain a current of 8 amperes?

10. An electric current is passed through a dilute solution of sulphuric acid. What are the accompanying phenomena, chemical and thermal?

11. A delicate pocket compass, made in Scotland, is carried to Uganda, and is found to be useless there, because the one pole bears up hard upon the glass cover. Which pole does so? Give also a full explanation of the phenomenon.

12. What is the cause of Spring and Neap Tides?

Department of Agriculture.

AGRICULTURE.

Friday, 14*th October* 1892.—9 *to* 12 *o'clock.*

1. Enumerate the more important soils from an agricultural point of view that are generally found in the British Isles. (*a.*) Describe shortly their physical and chemical properties. (*b.*) Give a brief statement of the means for their successful management in each case under present agricultural conditions.

2. On what class of soils and under what conditions would you advocate the use of lime? What chemical changes does it induce? (*a.*) Does a dressing of lime increase or diminish the manurial constituents contained in the soil? (*b.*) What weight per acre do you consider a suitable dressing?

3. What sheaf-binder would you recommend as being best adapted for ordinary farm work? (*a.*) What will the cutting, including string, cost per acre? (*b.*) How many acres can be cut per day where two sets of horses are used? (*c.*) What will an average crop cost per acre to stook?

4. Whether is fixed or portable barn machinery the more economical for use on the farm, and explain why? What number of men are required to work an eight h.p. engine and threshing-machine? How would you deal with the straw if it is to be used for feeding, as is now more generally the case?

5. Describe the best rotation for strong land in the South or Eastern counties of England. What rotation do you recommend as the best for strong land in the Lothians? What does a crop of fallow wheat cost, including rates and taxes, in any district which you may name?

6. Shortly describe the habits of growth, the productive and nutritive values of six of the best known varieties of pasture grasses. How should the land be "stocked and fed off" in order to ensure the best results? What is the best state for the pastures to be in at midsummer? Under what condition is it advisable to allow the strong growing grasses to form seed culms and ripen their seeds?

7. State shortly the best system of managing permanent pastures as regards grazing. How can old exhausted permanent pastures be renovated and improved? Describe the system adopted, the agents employed, and their cost per acre. Will the effects of your treatment be lasting or only temporary?

8. What are the chief manurial constituents contained in farmyard manure? How are these elements distributed between the solid and liquid excreta? How can the chief source of waste best be obviated?

GEOLOGY.

Tuesday, 26*th July* 1892.—1 *to* 3 *o'clock.*

1. Describe the chemical action of rain upon the various constituents of *Basalt*, *Granite*, *Gneiss*, and *Limestone.*

2. How do *animals* aid in the superficial disintegration of rocks? Give some examples.

3. What are the characters of *Till* or *Boulder Clay?* Why should deep ploughing, as a rule, be avoided on slopes where boulder clay forms the subsoil?

4. How does *capillary action* affect soils?

5. Define the terms *anticline*, *syncline*, *overlap*, *fault*, *dyke.*

6. Give the general chemical composition of *augite*, *calcite*, *dolomite*, *serpentine*, and *muscovite.*

7. What is *apatite*, and under what conditions does it occur?

Tuesday, 21*st March* 1893.—1 *to* 3 *o'clock.*

1. Describe two examples of Mechanically-formed rocks; of Chemically-formed rocks; and of Organically-derived rocks.

2. Give an account of the formation of Soil.

3. What kinds of rock yield the most fertile soils? Give reasons for your answer.

4. Define the terms *Outcrop*, *Strike*, *Dip*, *Fault*, *Denudation.*

5. Distinguish between *Foliation*, *Lamination*, and *Slaty Cleavage.*

6. Give the petrological characters of *Serpentine*, *Trachyte*, *Dolomite*, *Quartz-rock*, *Flint*, *Clay-slate.*

7. Distinguish between *soil* and *subsoil.* Why is the subsoil of alluvial deposits usually much deeper than that upon boulder-clay?

ECONOMICS.

Friday, 14*th October* 1892.—1 *to* 3 *o'clock.*

1. In a recent Report of a Committee of the United States Senate, it is stated that, taking nine representative occupations of the people, the wages of English labourers per day, reckoned in money, are about half those of American labourers.

Does it follow that the latter are twice as well off as the former? What other elements must be considered?

2. Illustrate the meaning and advantages of division of labour by reference to Agriculture.

3. What are the principal advantages of making the transfer of land by sale as cheap and simple as possible?

If the Government undertook to pay all the expenses connected with the sale of land, what would be the probable effect on the distribution of land in large and small estates?

4. What are the advantages and disadvantages of long leases?

5. Explain the theory of economic rent.

What are the chief points you would consider in offering a rent for a farm?

6. Give a definition of "value" and of "money," and of the "value of money."

7. Was the repeal of the Corn Laws a source of loss to the owners of agricultural land?

Monday, 27*th March* 1893.—1 *to* 3 *o'clock.*

1. State carefully the law of diminishing returns (*a*) with reference to a country as a whole; (*b*) with reference to a certain area of land.

2. Explain the theory of economic rent as applied to agricultural land.

3. What are the principal advantages of the system in which the landowner, farmer, and labourer are distinct, as compared with the system of peasant proprietors?

4. Under what circumstances (if any) would judicial rents be justifiable on economic grounds.

5. What are the principles of the French law as regards compensation for improvements? Compare the present Scottish system.

6. What are the advantages of division of labour? Why is there less division in agriculture than in manufactures?

7. State and criticise Mill's views on property in land.

SECOND EXAMINATION FOR B.Sc.

Department of Physical and Natural Science.

THE MATHEMATICAL SCIENCES.

[*For Papers in the Mathematical Sciences, see Examination Papers for the Degree in Arts with Honours in Mathematics.*]

THE PHYSICAL EXPERIMENTAL SCIENCES.

EXPERIMENTAL PHYSICS.

Thursday, 13*th October* 1892.—1 *to* 4 *o'clock.*

(*Answer, fully, six at most of the following Questions.*)

Describe a method of finding:—

1. The mean density of the earth.
2. Volumetric change due to interdiffusion of gases.
3. The thermo-electric position of a metal.
4. The ratio of the masses of the constituents of water.
5. The speed of light in water.
6. The principal moments of inertia of a rigid solid.

7. How the specific heat of a liquid depends upon its temperature.

8. The Dip, by means of induced currents.

9. The wavelengths in the D line.

10. The ratio of the kinetic and static electric units.

11. The time of contact, and the time-average of force, between a hammer and a nail.

12. Volumetric change, when electric discharge passes through a compound gas.

Monday, 10*th April* 1893.—1 *to* 4 *o'clock.*

[*Fully detailed anwers to be given*, *limited to Six of the following questions.*]

1. Describe the process employed for determining the speed of sound in fresh water; and the precautions required in carrying it out.

2. How has the composition of water by mass been determined, and why are the results still somewhat discordant?

3. Describe fully one method of measuring the intensity of a powerful magnetic field.

4. Explain, in detail, a method of finding the viscosity of a gas.

5. How has the compressibility of liquids, at extremely high pressures, been measured?

6. Point out the precautions required in obtaining the latent heat of water vapour at pressures lower than an atmosphere.

7. Give a general account of the appearances presented by a substance at temperatures close to, but (1) above, (2) below, its critical temperature.

8. Show, in detail, how to obtain the elastic constants of a homogeneous elastic solid.

9. Describe one method of finding the diffusivity of a salt in water.

10. Explain one form of Hertz' experiments for measuring the length of electromagnetic waves.

CHEMISTRY.

FIRST PAPER.

Monday, 25*th July* 1892.—10 *to* 12 *o'clock.*

1. State what you know of the compounds of carbonic oxide with metals: giving in each case the mode of preparation, general properties and decompositions.

2. How is hydroxylamine prepared? What are its special uses as a reagent?

3. What compounds are suitable for the determination of the atomic weight of the following metals:—barium, lead, zinc, sodium? Sketch the process in each case.

SECOND PAPER.

Monday, 25th July 1892.—1 *to* 3 *o'clock.*

4. Give the constitution of four of the following substances with the evidence in each case. Uric acid, cinnamic acid, anthranilic acid, pyromucic acid, aniline, azobenzene, pinacone, quinoline.

5. Give the method of preparation of four of the following substances. Aceto-acetic ether, malonic acid, mandelic acid, fructose, terephthalic acid, diphenylamine, hydroquinone.

6. Give evidence for the unsymmetrical constitution of the thiosulphates.

Monday, 20th March 1893.—10 *to* 12 *o'clock.*

1. What Physical and Chemical reasons can be given for the atomic weights of Magnesium, Calcium, Barium, Lead, Mercury, at present adopted in preference to atomic weights one-half of these; for instance, why do we write $CaCl$ $(Ca=40)$, rather than $CaCl$ $(Ca=20)$?

2. A specimen of Bromine contains small quantities of both Chlorine and Iodine. How can you obtain pure Bromine from it?

3. How is Potassium Platinocyanide prepared? State anything you know of the optical character of crystals of platinocyanides.

4. How is the substance having the formula HN_3 prepared? Describe its properties, and those of its salts.

Monday, 20th March 1893.—1 *to* 3 *o'clock.*

5. How is Benzoic aldehyde obtained from Toluene? Give another example of the same kind of reaction.

6. Discuss fully the constitution of (*a*) Acetic acid; (*b*) Lactic acid; (*c*) Hydroxylamine.

7. What is the structural formula of Urea? How can we obtain substances in which part or the whole of the hydrogen of urea is replaced by alchohol radicals?

8. How are the three hydroxy-benzoic acids obtained? How is their isomerism explained?

THE NATURAL SCIENCES.

ZOOLOGY AND COMPARATIVE ANATOMY.

Tuesday, 26th July 1892.—10 *to* 12 *o'clock.*

(*Only four of the following Questions are to be answered, but* 6 *must be one of these.*)

1. In what ways does parasitism affect the *form* and mode of reproduction of animals? Give examples.

2. Classify the Ascidians, and state the characters of the main groups.

Which of the groups do you regard as the most primitive, and why?

3. Give an account of *Cephalodiscus*, and show how it is allied to other forms.

4. What are the chief morphological differences between the auditory organs of Myxine, Petromyzon, Scyllium, a bird, and a mammal?

5. State fully the arguments on which the descent of birds from reptiles is based.

6. Explain, with examples, what is meant by sexual selection, and discuss its efficacy in producing species.

7. Give the characters and classification of the Edentata.

Mention five genera of the group, and point out the more important characters and the geographical distribution of each.

Tuesday, 21*st March* 1893.—10 *to* 1 *o'clock.*

1. Give a short comparative account of the renal organs in Mollusca, illustrating it by such forms as Chiton, Anodon, Patella, Littorina, and Octopus.

2. Refer to their zoological position—Sycandra, Millepora, Limulus, Nautilus, Cheiromys, and Neomenia, and give the chief characteristics of any three of them. How do you account for the specialisation in the manus of Cheiromys?

3. Write a short essay on the fauna of islands, and point out the peculiarities in the fauna of New Zealand, Madagascar, the Galapagos and one or two other oceanic islands.

4. Describe the recent researches on the development of the placenta in the rabbit. State when and how in the vertebrata, connection between mother and fœtus is met with other than by an allantoic placenta.

5. Write an Essay on the Ancestral History of the Ungulata; *or*, on the Ancestral History of Echinoderms.

BOTANY.

Monday, 25*th July* 1892.—1 *to* 3 *o'clock.*

1. Discuss the question of the movement of water through the roots and stem of a forest tree, pointing out particularly the channels through which the water is conveyed, and the forces that move it.

2. Write an account of the life-history of one of the following:—*Protococcus viridis*, *Fucus serratus*, *Pilularia globulifera*.

3. Give an account of the characters of Hepaticæ, and point out their relationships to the Thallophyta and the Pteridophyta.

4. Describe the condition of Apogamy in specific examples, illustrating its degrees. What is its significance in the cases you describe?

5. Describe the adaptations to conditions of life in a dry region which are exhibited by flowering plants.

Monday, 20th March 1893.—1 *to* 3 *o'clock.*

1. Write a comparative account of the chief forms of inflorescence.
2. Give an account of the flora of any oceanic island.
3. Trace the reduction in relative importance of the Gametophyte generation through the several sections of Vascular Cryptogams.
4. Describe the structure, development, and growth of the primary root in an Angiosperm. Trace also the development of lateral rootlets from a primary root.
5. Illustrate by some examples the significance of movements exhibited by plant-organs. Explain in each case the mechanism of the movements.

PRACTICAL BOTANY.

July 1892.

1. Make preparations of specimen A. Mount and leave for examination. Make illustrative drawings with references.
2. By the aid of the flora given you determine the genus and species of B and C.
3. Refer to their natural orders D, E, F.
4. Identify, and briefly describe, specimens G, H, I, K, L, M, N, O, P.

A, Gnetum ; B, Phalaris arundinacea ; C, Anagallis cœrulea ; D, Boronia ; E, Schizanthus ; F, Bauera ; G, Endocarp of Palm ; H, Stem of Tilia europæa ; I, Root of Ruscus androgynus ; K, Root system of Vicia Faba ; L, Cycas revoluta, Female cone ; M, Yucca, seedling ; N, Zamia horrida, Male cone ; O, Phallus fœtidus ; P, Sigillaria reniformis.

Wednesday, 22nd March 1893.—10 *to* 1 *o'clock.*

1. Make preparations of specimen A. Mount and leave for examination. Make illustrative drawings with references.
2. Describe specimen B.
3. Describe and refer to their Natural Orders Specimens C and D.
4. Name by means of the Flora provided, Specimen E.
5. Refer to their Natural Orders Specimens F and G.
6. Briefly describe and identify Specimens H, I, J, K, L, M, N, O.

A. Bougainvillea glabra.
B. Aponogeton distachyon.
C. Daphne Mezereum.
D. Aluus glutinosa.
E. Gagea lutea.
F. Mahonia Aquifolium.
G. Dondia Epipactis.
H. Staminal Leaf of Cycad.
I. Carpel of Cycas revoluta.
J. Cynophallus.
K. Fegatella conica.
L. Nepenthes Curtisii (Glands).
M. Pilularia (Sporocarp).
N. Equisetum (Sporiferous Spike).
O. Lycopodium.

PHYSIOLOGY.

Monday, 25th July 1892.—10 *to* 12 *o'clock.*

1. Give an account of the manner in which the total amount of heat produced by an animal is measured, and of the thermo-electric method for measuring the temperature of animal tissues.

2. Describe the method by which the velocity of the current of action in a nerve is measured.

3. Describe the minute structure of the rod and cone cells of the retina, and the changes which light is known to produce in them and in the retinal epithelium.

4. Give an account of lymph, and its movement.

Monday, 20th March 1893.—10 *to* 12 *o'clock.*

1. (*a.*) What is known regarding the origin of the organic constituents of milk in the cells of the mammary gland?

(*b.*) Discuss the effect of rennet on milk.

2. Give an account of karyokinesis as it may be traced in the animal cell.

3. (*a.*) Give an account of the minute structure of the membranous semi-circular canals, and of the origin of their nerves in the brain.

(*b.*) State and criticise the theories advanced regarding their function.

GEOLOGY, INCLUDING MINERALOGY AND PALÆONTOLOGY.

Tuesday, 26th July 1892.—1 *to* 3 *o'clock.*

(*Not more than two Questions in each Division to be attempted.*)

A

1. Give some account of the chemical action of *Rain*. How are Augite, Olivine, and the Felspars affected, and what is the nature of the resulting products?

2. What is supposed to be the ultimate cause of *Volcanic action?*

3. What is Dr Murray's theory of *Coral Islands?*

B

4. Describe carefully the macroscopic and microscopic characters of *Trachyte*, *Andesite*, *Gneiss*, *Marble*, and *Syenite*, and give the origin and mode of occurrence of each.

5. Give a particular account of the more important *Micas*. Of what rocks are they conspicuous ingredients? What is the nature of their decomposition products?

6. What is a *Twin?* Give examples of *simple* and *polysynthetic* twinning.

C

7. What are *Fissure Eruptions?* Mention examples.

8. What is meant by a *Plain of Marine Denudation?* Describe any such plain known to you.

9. Describe the general structure of a true mountain-chain. How is it supposed to have originated?

D

10. Describe the structure of *Belemnites.*

11. What are the distinguishing characters of *Archæopteryx*, *Ichthyornis*, *Hesperornis*, and *Odontopteryx?*

12. Give some account of the physical conditions under which the carboniferous strata of the Edinburgh district were accumulated.

Tuesday, 21*st March* 1893.—1 *to* 3 *o'clock.*

(*Any eight Questions to be attempted*, *including* 4, 5, *and* 10.)

1. Give some account of Abysmal or Pelagic Accumulations.

2. Describe the character of a Volcano composed exclusively of lava.

3. What is Arkose, and how has it originated?

4. Give the mineralogical characters of Nepheline, Nosean, Schorl, and Sphene, and describe the mode of their occurrence and the part they play as rock-constituents.

5. Give some account of the Plutonic Acid Igneous rocks, and the Volcanic rocks which agree with them in composition.

6. Define the terms Base, Groundmass, and Devitrification.

7. What is the origin of Zeolites, Calcite, Epidote, and Serpentine in crystalline igneous rocks?

8. What are the distinguishing features of an Intrusive Sheet?

9. Draw a horizontal section across any district with which you are acquainted, so as to show, in a general manner, its geological structure.

10. What are the distinguishing characters of *Mastodon* and *Elephas?*

Department of Engineering.

DYNAMICS.

Tuesday, 1*st November* 1892.—1 *to* 4 *o'clock.*

(*Twelve Questions at most to be answered.*)

1. Point out why angular velocities are to be compounded according to the same law as velocities; and give from this the explanation of the steady conical motion of the axis of a spinning top.

2. Discuss Newton's Lex II., and show how to apply it in comparing the times of similar motions on different scales. Thus, show that the square of the period of the simplest vibration of a rain-drop about its spherical figure is proportional to the cube of the radius.

3. Compare the amounts of work required to bring a cubic foot of (*a*) Air, with Boyle's Law; (*b*) Water (whose compressibility is roughly 1/20,000 per atmosphere) from 1 to 100 atmospheres pressure.

4. Find the speed acquired by a body falling freely to the earth's surface from a distance of 100-fold the radius.

5. What is meant by the "terminal velocity" of a falling body? Calculate its value when the resistance of the air produces an acceleration measured by $v^2/280$ in feet seconds.

6. State Hook's Law for an elastic string. There are two strings, and a uniform rod, all of equal length, a. The weight of the rod is sufficient to double the length of one of the strings, and to treble the length of the other. Find the position of equilibrium when the rod is supported by the two strings, attached to its ends and to points at a distance (a) from one another in a horizontal line. How must the upper ends of the strings be relatively fixed, that the rod may remain horizontal?

7. Find the work done in winding (on a massless drum) an elastic rope of 100 feet long, which weighs 1 lb. per foot, and has its length doubled when it hangs by one end. How much of this work has been done when half of the rope has been coiled on the drum?

8. A mass of 1 cwt., supported by a string wound on a massive drum, takes 4 seconds to fall 64 feet to the ground. If $\frac{1}{4}$ of the whole energy is absorbed by friction, what will be the kinetic energy left in the drum?

9. Calculate the moments of inertia of a uniform solid cube about (*a*) a diagonal, (*b*) an edge, (*c*) a diagonal of one face.

10. A thin, uniform wire, in the form of a circular arc of given radius, oscillates about a horizontal axis through its middle point, and perpendicular to its plane. Show that the time of vibration is independent of the length of the arc.

11. Calculate the rate of transmission of a wave of extension along an iron wire, assuming 7.8 as the density of iron, and 26.10^6 (in pounds weight per square inch) as the value of Young's modulus.

12. A cube full of water is placed with one diagonal vertical. Find the whole pressure on, and the centre of pressure of, each of its sides.

13. A receiver contains air at 40 atmospheres, which is allowed to escape slowly from an orifice. Compare the times which must elapse before the pressure falls to 30, 20, 10 atmospheres respectively. How do thermodynamic considerations affect the result?

14. Take the compressibility of sea-water as 1/22,000 per atmosphere, and the mean height of a sea-water barometer as 33 feet. Calculate how much the level of an ocean, 4 miles deep, would be raised if the water ceased to be compressible.

8th April 1893.—1 *to* 4 *o'clock.*

[*Competitors are advised to confine their answering to a moderate number of questions and to treat these fully.*]

1. A point has simultaneously two Simple Harmonic Motions in directions perpendicular to one another. Their amplitudes are equal and their periods are 1 and $1\frac{1}{60}$ seconds respectively. Show, graphically or otherwise, how the resultant motion changes character during an interval of one minute.

2. Prove that lines representing angular velocities about axes which pass through a point are to be compounded by the rule for linear velocities.

3. A plane figure moves in its own plane with constant angular velocity about one of its points which describes a simple harmonic motion in a straight line. Find the locus of the instantaneous centre of rotation (1) in space (2) in the body.

4. A weightless elastic string (unstretched) has its ends fixed at two points at the same level, and a mass is attached at any point of its length. Find the position of equilibrium, the mass being such as would just double the length of the string when hanging vertically.

5. State the laws of direct impact of spherical masses. One particle impinges directly on another at rest. Assuming no kinetic energy to be lost by the impact, show that the fraction of energy transferred from the one particle to the other is exactly the same whether the smaller mass strike the larger, or the larger the smaller.

6. A ladder rests against a smooth wall, to which its lower end is attached by a horizontal rope. Find the increase of tension of the rope (the ground being supposed smooth) when a weight is placed at a given point of the ladder.

7. A circular disc oscillates pendulum-wise about a horizontal axis perpendicular to its plane. Find the position of the axis which gives the minimum time of oscillation.

8. Compare the times in which a sphere will descend a given inclined plane when (1) smooth (2) perfectly rough.

9. Investigate the propagation of a small longitudinal disturbance along a metal rod. Calculate its velocity in the case of iron, for which Young's Modulus is 12,000 tons weight per square inch and the density 480 lbs. per cubic foot.

10. Calculate the work done in *just* raising a mass from the ground by means of an elastic string. Assume any numerical data you please, and calculate the corresponding answer.

11. Show that a simple longitudinal stress is equivalent to an isotropic stress and two shearing stresses. Thence deduce the expression for Young's Modulus in terms of the rigidity and resistance to compression.

12. When a cylinder rolls down an inclined plane it is often observed to jump. How can this be explained?

13. Investigate the relation between stress and strain in the case of the simple torsion of a cylindrical bar of circular section. Show that, with any other form of section, a simple twist cannot be sustained by end couples only.

ENGINEERING.

Wednesday, 2nd November 1892.—11 *to* 1 *o'clock.*

1. What material is generally used for making watertight earthen dams? Make a drawing of section of a dam—say, 60 ft. in height.

2. An embankment has to be constructed across a stream in the south of Scotland. The drainage area of the stream is 6000 acres. State what provision should be made for passing flood-water during its construction, giving dimensions of outlet works or bye-pass channel,—length of crest of waste weir and proper height of bank above waste weir—giving reasons, total height of bank being 50 ft.

3. Make drawing, with dimensions marked, of a dock wall, for a depth of water of 30 ft., and show drawing of a round corner, and mention reasons for preferring any particular material for its construction.

4. Two million gallons of water have to be raised 130 ft. in 24 hours to supply a service reservoir 2 miles off. State approximate population for which this would be a suitable quantity, horse-power of engines required to do this work, and the diameter of the main pipe you would recommend, assuming coal to be required equal to 4 lbs. per H.P. per hour, costing 10s. per ton.

5. Calculate suitable thickness for a pipe 24 in. diameter to stand a working pressure of 300 ft. Mention what advantage steel pipes have over cast iron, if any, and also any disadvantages.

Wednesday, 2nd November 1892.—2 *to* 4 *o'clock.*

1. A jib crane has body 12 ft. high, jib 20 ft. long at an angle of 45°; calculate strain on jib and tie with load of 6 tons.

2. Design a foot-bridge, 60 ft. span, 4 ft. wide, of lattice girders with parallel booms, giving dimensions of materials in top and bottom members, and in cross bracing. Give reasons for assumed greatest strains which the bridge will have to bear.

3. In some circumstances it is found advisable to fill the puddle trench of a reservoir with concrete instead of clay: state these conditions.

4. Give the proper proportions of sand, gravel or broken metal, and cement, to form watertight concrete, and mention general characteristics of first class Portland cement.

5. A rectangular culvert, 4 ft. 6 in. by 3 ft., with semi-circular roof has a gradient of 1 in 6400; calculate its discharge—(*a*) if running 3 ft. deep, and (*b*) if running full.

Thursday, *3rd November* 1892.—11 *to* 1 *o'clock.*

1. Describe the adjustments of (*a*) the box-sextant, (*b*) the transit theodolite.

2. In levelling a section, four, and only four, sights are taken from a certain position of the level. The reduced levels of the points on which these sights are taken are, 246·72, 257·21, 256·13, 259·83. The first sight is 13·53. Construct and reduce the level book for the portion of the section in question.

3. Suppose, in a single riveted lap joint, the shearing strength per unit of area of the rivets is equal to the tearing strength of the plates per unit area. Then, with $\frac{1}{2}$ in. plates, $\frac{7}{8}$ in. rivets, and $2\frac{1}{4}$ in. pitch, will the joint yield by tearing or by shearing? Calculate also the efficiency of the joint.

4. The cylinders of a locomotive are 20 in. diameter, and the stroke is 2 feet, with 6 feet driving wheels. Find the tractive force exerted by the engine for each pound of the mean effective pressure per square inch of piston area.

5. Determine the horse power that may be transmitted by a leather belt 5 in. wide, $\frac{1}{4}$ in. thick, when running at a speed of 50 feet per second, assuming that the tension on the loose side is $\frac{4}{10}$ of that of the tight side of the belt, and that the working strength of the belt is 275 lbs. per square inch of sectional area.

NOTE.—*Answers should, as far as possible, be illustrated by figured sketches or diagrams.*

Thursday, *3rd November* 1892.—2 *to* 4 *o'clock.*

1. The chainage at the point of intersection of the tangents to a railway curve is 3,876 links, and the angle between them is 124°. Find the chainage at the beginning and the end of a curve of 40 chains radius, and calculate the angles necessary to enable you to set out such a curve with the theodolite.

2. A load of 2 tons is carried at the centre of a timber beam, 6 in. × 6 in. × 15 ft. long, supported at both ends. Assuming the coefficient of elasticity to be 1,200,000 lbs. per square inch, determine the least radius of curvature.

3. Draw the force diagram for a warren girder consisting of 7 bays in the lower boom, each of which is the base of an equilateral triangle. At each of the three joints of this boom nearest one end of the girder there is a load of 12 tons, and at each of the other joints of the same boom, a load of 2 tons.

4. Give a short account of the thermal exchanges which take place in a steam engine between the steam and the cylinder walls, and explain how this action is affected by the use of a steam jacket.

5. A hollow steel shaft is required to replace one of solid wrought-iron of the same diameter. Supposing the one material is 35 per cent. stronger than the other, what fraction of the outside diameter may the internal diameter of the hollow shaft be; and what is the percentage of saving in weight by the substitution?

NOTE.—*Answers must, as far as possible, be illustrated by figured sketches or diagrams.*

Monday, 3rd April 1893.—11 *to* 1 *o'clock.*

1. Calculate at what depth a cutting 32 feet wide at formation level, with slopes of 1½ to 1, becomes of equal cost with tunnelling, when the cutting costs 1s. 6d. per cubic yard and the tunnelling is £30 per lineal yard.

2. Is it a good plan to mix lime and cement together in making mortar? Why is this sometimes done, and what may be the result? Describe difference of manufacture of German and English Portland cement, and state generally the effect of admixture with clean and dirty sand.

3. Sketch wrought iron parallel plate girder for single line of railway for bridge 40 feet span, with dimensions of different members, and show calculations determining the results, with weight for engine of 16 tons on single pair of wheels.

4. Calculate weight of a cylinder of cast iron 12 feet long, 12 inches interior diameter, and 2 inches in thickness. Find weight of a wrought iron cylinder of same length and strength to resist internal pressure, taking factor of safety for each of ten, and show calculations.

5. A suspension bridge has a span of 100 feet and versed sine of 10 feet. Total weight of structure is 50 tons. Neglecting question of moving load, calculate strain on chains at centre and at each end, and sketch appropriate cross sections, with dimensions.

NOTE.—Answers should, as far as possible, be illustrated by sketches or diagrams.

Monday, 3rd April.—2 *to* 4 *o'clock.*

1. Make up the following page of levels in two different ways, and say what advantages one has over the other. Plot roughly to vertical scale of 10 feet to the inch, and horizontal 1 inch equals 100 feet, taking convenient datum line for section.

Distance.	B.S.	F.S.	
...	6·31	...	O.B.M. 80·20
0	...	7·23	
50	...	9·60	
...	2·17	...	
70	...	6·34	
...	8·05	...	
100	...	9·01	
...	4·27	...	
220	...	9·12	
310	...	6·13	
400	...	7·81	
...	2·04	...	
420	...	3·60	
480	...	8·12	
600	...	4·02	

2. What advantage has a portable triangular notch board over a rectangular one for measuring the flow of a small stream? Calculate the discharge over a triangular one, the width of notch being twice the depth and the water going over 9 inches deep; and the discharge over a rectangular one 24 inches wide and 4 inches deep. Describe manner of erection and the necessary precautions to be taken to secure accuracy of result.

3. The bottom member of a girder is 18 inches broad and 2 inches thick. Make sketch of joint, with $\frac{1}{2}$ inch plates, showing suitable covering plates and arrangement of rivets.

4. Of two alternative water schemes for supply of a large town, one is by gravitation and the other by pumping from a deep well. State the considerations which should decide the adoption of one in preference to the other, and mention the principal structural works required in each.

5. Describe the special properties of green heart, oak, pitch pine, ash, elm, beech, lignum vitæ, and chestnut, and indicate for what purpose each is generally used.

NOTE.—Answers should, as far as possible, be illustrated by sketches or diagrams.

Tuesday, 4th April 1893.—11 *to* 1 *o'clock.*

1. Describe the construction and applications of
   (α.) The Circumferenter.
   (β.) Colby's Compensation Bars.

2. Why is it sometimes of importance, when using a turbine, to have as large a diameter of wheel as possible, and by what considerations is this diameter limited? State whether your answer would apply equally to a centrifugal pump.

3. The accompanying figured sketch represents one half of the braced pier of a railway bridge, the roadway of which is carried on the top booms of the girders. Determine by a graphic method, and from the data supplied, the stresses on all the members of the structure.

4. Three wheels in gear with each other form an epicyclic train. The first, which is the driver, has 75, the second 60, and the third wheel 45 teeth. The driver rotates three times and the arm, in an opposite direction, four times a minute. How many times will each of the other wheels rotate in the same interval?

5. A parabolic arched-rib has a span of 50 feet and a rise of 20 feet, and is fixed at the springings. Upon one half of the arch there is a uniformly distributed load of 100 tons, and upon the other a similar load of 200 tons. Determine the bending moment and shearing stress at points 25 feet from each springing.

NOTE.—Answers should, as far as possible, be illustrated by sketches or diagrams.

Tuesday, 4th April 1893.—2 *to* 4 *o'clock.*

1. The angle between two straight stretches of a railway is 120°, and it is required to connect them by a circular curve of 10 chains radius. Find the distance from the intersection of the tangents to the springing points of the curve, and show how the curve may be set out by means of a chain and theodolite.

2. What is Joule's equivalent, and what law does it express? Assuming the truth of this law, and that the specific heat of air at constant volume, expressed in units of work, is 130·3, and its specific heat, similarly expressed at constant pressure, is 183·45, and that

$$pv = 53{\cdot}15\,(t+461),$$

find Joule's equivalent.

3. A water-wheel is 20 ft. diameter, weighs 2 tons, and makes 10 revolutions per minute. The gudgeons are 6″ diameter, and the coefficient of friction is ·1. Determine (α) the loss of mechanical effect due to friction, (β) how many turns the wheel would make before coming to rest, if the power driving it were suddenly cut off.

4. In a two-cylinder high-speed engine the pistons are 20″ diameter, the stroke 15″, the revolutions 400 per minute, and the I.H.P. 400. Find the mean effective pressure on the pistons, and the mean turning moment on the crank shaft.

5. Supposing the initial temperature of the condenser-water in an engine is 60° F., that the steam enters the condenser at 190° F., and that the temperature of the water, when it leaves it, is 120°; what quantity of injection water is being used per pound of steam?

NOTE.—Answers should, as far as possible, be illustrated by sketches or diagrams.

Wednesday, 5th April 1893.—10 *to* 1 *o'clock.*

I. PLANE GEOMETRY.

1. Divide a circle 4″ diameter into five equal areas by means of concentric circles.

2. The diameter of the pitch circle of a spur wheel is 5″, and the pitch $\frac{5}{8}$″. The teeth are cycloidal, and the rolling circle has a diameter of $2\frac{1}{2}$″. Draw the faces and flanks of one tooth.

3. ABC is a triangle, of which the side $AB = 3''$, $BC = CA = 2''$. If BCA be supposed to be a string of invariable length $= 4''$ and to have its ends attached to A and B, draw the locus of C, the string always remaining tight.

II. SOLID GEOMETRY.

1. Draw, in plan and elevation, a regular octagonal pyramid, height = 3″, and angle between two adjacent edges = 15°. Also find the true shape of a section made by a plane inclined at 60°, and whose H.T. lies in one of the diagonals of the octagon.

2. Draw the plan and elevation of a regular heptagon of $1\frac{1}{2}''$ side, when its plane is inclined to the horizontal plane at 60°, and to the vertical plane at 75°, and its base is inclined at 30°.

3. Draw an isometric projection of a cross formed by the mutual bisection, at right angles, of two right cylinders, each 1″ diameter, and 4″ and 3″ long respectively. An isometric scale is to be used.

DRAWING.

Wednesday, 5th April 1893.—2 *to* 5 *o'clock.*

From one or other of the figured sketches supplied—(1.) Hydraulic sluice valve; (2.) braced iron foot-bridge—make the detailed drawings indicated.

Inking in is unnecessary.

Department of Public Health.

MEDICINE.

Monday, 4th July 1892.—11 *to* 1 *o'clock.*

1. What measures would you adopt to check the spread of diphtheria, and what explanation can you give of the causation of the chief symptoms of that disease?

2. What line of argument would you advance in favour of vaccination and revaccination?

3. By what channels does the Tubercles Bacillus enter the system?

SANITARY LAW AND VITAL STATISTICS.

Monday, 4th July 1892.—1 *to* 3 *o'clock.*

(*Three Questions only to be answered, of which Nos.* 1 *and* 4 *must be two.*)

I.—BYE-LAWS AND REGULATIONS.

Enumerate the various matters with respect to which a Sanitary Authority may make bye-laws and regulations.

State in regard of each subject matter to be regulated—

(1.) The general Act or Order under which powers are given to this end.

(2.) The person upon whom the duty of inspection devolves.

II.—QUARANTINE.

What disease is "quarantinable" in this country?

Give particulars of the difference of procedure adopted in this and in one or more other European countries as regards vessels found to have cholera on board them at the port of arrival.

Discuss the relative advantage of procedure of the one and the other sort from the view points of public health and trade interest.

III.—LIFE TABLE.

What is a life table? State the *data* required for its construction, and the method you would employ in constructing it.

Give a formula by means of which, in the absence of a life table, the "expectation of life" could be approximately estimated.

IV.—MORTALITY AND VITAL STATISTICS.

The following statistics for the ten years 1871-80 inclusive, with respect to a pottery district in Staffordshire, are taken from the Supplement to the forty-fifth Annual Report of the Registrar-General of England and Wales:—

MEAN POPULATION 1871-80	96,787
BIRTHS	41,897
DEATHS	24,967

CAUSE OF DEATH.	AGE AT DEATH.			Mean Annual Death Rate per 1000 all ages.
	Under 5 Years.	5 Years and upwards.	All Ages.	
Smallpox	51	139	190	0.20
Measles	449	29	478	0.49
Scarlet Fever . .	845	337	1,182	1.22
Diphtheria	54	45	99	0.10
Whooping Cough . .	480	15	495	0.51
Typhus	7	34	41	0.04
Enteric Fever . .	77	351	428	0.44
Simple Continued Fever	47	90	137	0.14
Puerperal Fever . .	—	106	106	0.11
Diarrhœa and Dysentery	1,459	160	1,619	1.67
Cholera	16	16	32	0.03
Cancer	1	377	378	0.39
Scrofula	98	47	145	0.15
Tabes Mesenterica .	361	41	402	0.42
Phthisis	163	2,000	2,163	2.23
Hydrocephalus . .	304	50	354	0.37
Respiratory Diseases .	2,307	2,434	4,741	4.90
Other causes . .	6,051	5,926	11,977	12.39

AGE AT DEATH.	Mean Population 1871-80.	Deaths.	Mean Annual Death Rate.
Under 1 year . . .	3,391	7,914	—
1 to 2 years . . .	2,821	2,610	—
2 ,, 3 ,, . . .	2,915	1,108	—
3 ,, 4 ,, . . .	2,831	653	—
4 ,, 5 ,, . . .	2,761	485	—
Total under 5 years .	14,719	12,770	86.8
5 to 10 years . .	12,513	958	7.7
10 ,, 15 ,, . . .	10,840	423	3.9
15 ,, 20 ,, . . .	9,761	538	5.5
20 ,, 25 ,, . . .	8,715	649	7.45
25 ,, 35 ,, . . .	14,572	1,348	9.25
35 ,, 45 ,, . . .	10,958	1,808	16.5
45 ,, 55 ,, . . .	7,597	1,844	24.3
55 ,, 65 ,, . . .	4,519	1,839	40.7
65 ,, 75 ,, . . .	1,983	1,673	84.4
75 years and upwards .	610	1,117	183.1

You are requested to give brief general comments on these figures. Indicate any which are in your opinion significant as regards (1) Sanitary circumstances of the district, (2) Effects of trade upon health, and (3) Longevity.

PRACTICAL SANITATION.

Tuesday, 5th July 1892.—10 *to* 12 *o'clock.*

(*Three Questions only to be answered, of which Nos.* 1 *and* 4 *must be two.*)

I.—DWELLINGS OF THE POOR.

In a town where an area has been condemned by the Medical Officer of Health as unhealthy in consequence of the houses being erected on the back-to-back plan, the five schemes shewn in the plan handed to you are each suggested to remedy the defects complained of with a view to avoidance of the total demolition of the property. You are requested to advise the Sanitary Authority as to the relative merits and defects of each scheme, and to state which scheme (if any) in your opinion should be adopted, with the reasons for your advice.

II.—SEWAGE DISPOSAL.

Describe in detail the method of disposal which you would advise to be adopted with respect to the sewage of a riverside town where there are a number of woollen mills and dyeworks.

III.—DISPOSAL OF THE DEAD.

Review and criticise the arguments which have been advanced for and against cremation and burial respectively, as sanitary methods for the disposal of the dead.

IV.—WATER SUPPLY.

The Sanitary Authority of a town having a population of 50,000 persons, determine to provide a public water supply for the district. Three alternative schemes are proposed, by any one of which an adequate supply can be ensured, the respective sources being—

(*a*) A river forty miles from its source, which for that distance has passed through a sparsely populated country, the largest town (population 5000) on the bank above the proposed intake being fully twelve miles distant.

(*b*) A deep well in the chalk.

(*c*) A catchment area consisting chiefly of wild moorland.

The analyses of the three waters are as follows :—

PARTS PER 100,000.

	Reaction.	Total Solids.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Chlorine.	HARDNESS.		
									Temporary.	Permanent.	Total.
River	Alkaline	17·24	·180	·013	·001	·000	·014	0·90	8·6	3·6	12·2
Chalk Well	Alkaline	31·08	·020	·006	·000	·027	·033	1·35	14·4	9·0	23·4
Moorland	Slightly acid in Spring and Autumn	10·10	·582	·079	·004	·000	·083	1·02	0·9	5·5	6·4

You are requested to advise the Sanitary Authority as to the relative advantages and disadvantages of the several sources from a health point of view, noting any special dangers. In any case where the *data* are not sufficient to enable you to form a decisive opinion on any particular point, state what further *data* you would require.

PRACTICAL SANITATION, MENSURATION, AND DRAWING.

Tuesday, 5*th July* 1892.—1 *to* 4 *o'clock.*

1. What are the chief causes of dampness in a dwelling? State fully what means you would adopt for its prevention in each case.

2. To what tests would you deem it necessary to subject (*a*) the cement ; (*b*) the bricks ; (*c*) the earthenware tubes, employed in sanitary work? Give your reasons in each instance.

3. A river having been selected as the source of a town's water-supply, certain works will be necessary in order to render the supply available. State what these usually are, and give, with sketches, an account of the construction and use of each.

4. A wooden shed, 50 feet long and 20 feet wide, is to be used as a ward in a temporary hospital. Measured from the floor, the sides are 15 feet high, and carry an open, arched, corrugated iron roof, which, at its centre, is 21 feet above the floor. Supposing that 1350 cubic feet be allowed per bed, calculate how many patients the structure will accommodate. Do you consider the superficial area available such as would warrant you in thus utilising the building to the full extent of its cubic capacity?

5. On the accompanying sheet of paper is the dimensioned sketch of a common earthenware gully-trap. You are required to make, on a scale of $1\frac{1}{2}$ inches to a foot, a plan, elevation, and section on the line AB, of the object shown; each view being properly projected from the others.

NOTE.—*All candidates must attempt questions* 4 *and* 5. *All answers should, as far as possible, be illustrated by sketches or diagrams.*

Department of Agriculture.

AGRICULTURE.

Friday, 14*th October.*—9 *to* 12 *o'clock.*

1. What are the chief breeds of dairy cattle kept in Scotland?
    (*a.*) What is considered the average yield of milk in the year of each breed you name?
    (*b.*) How much cheese will the milk of an average cow of any breed you may name produce, and what will it realise at present prices?
    (*c.*) How much butter would a similar quantity of milk produce? What would be the gross receipts from butter, and how much from the bye-products—skim-milk and buttermilk?

2. What are the breeds of cattle best adapted for dairy purposes in England.

What quantity of milk will an average specimen produce during twelve months?

How much will the produce realise if sold as sweet milk; how much if made into cheese; and what if butter is the chief saleable product? Add to the last two divisions of your answer the value of the bye-products.

3. Describe in detail the most economical system of calf-rearing, from birth to the age of six months. Estimate the cost per week.

4. What will an average shorthorn dairy cow in full profit cost per week under ordinary conditions on a farm (*a*) during the summer six months, (*b*) during the winter six months,—the object throughout being to obtain the largest possible yield? (*c*) Estimate the net value of the

produce, and show the results of your calculations by striking a balance.

5. What foods would you use, and in what quantities, for a shorthorn cow in full milk, the albuminoid ratio to be one to five? (*a*) What quantity of water will a cow thus fed require daily?

6. What is an average percentage of cream or butter-fat left in separated milk as it comes from a Laval separator?

7. The object of the cheese or butter-maker is to prepare for the market a product of the finest quality. What auxiliary foods to those produced on the farm must he use, and in what quantities, to ensure the production of the best raw materials?

- (*a.*) Under what conditions will it pay to use artificial foods in the summer as well as during the winter months?
- (*b.*) If by a more intelligent system of feeding, the butter-fat is increased one per cent., what will this add per cent. to the output of cheese?

8. With the present low range of prices, how does the value of cereal produce compare with that of hay or straw, calculated in each case on their nutritive values? Which are the most economical auxiliary foods for a milch cow—oilcakes, Indian-corn-meal, ricemeal, or the meals of home-grown cereals? Compare these on their merits as food stuffs, and state the differences between them.

9. Given a farm of 400 acres of arable land, 100 acres of which is good permanent pasture, situated in a district which you may select and name, state—

- (*a.*) What rent you ought to pay.
- (*b.*) What rotation you would adopt.
- (*c.*) What stock you would keep of sheep and cattle; but these not to include cows.
- (*d.*) What quantity of home-grown farm produce you would have to give them.
- (*e.*) What artificial foods you would purchase.
- (*f.*) What profit you ought to make (1) on sheep ,(2) on cattle, and (3) on crops cultivated.

Monday, 27*th March* 1893.—9 *to* 12 *o'clock.*

1. Indicate the average composition of the milk of the Shorthorn. How many gallons of milk and pounds of butter will such a cow give during the usual period of lactation? How many gallons of milk are necessary to produce a gallon of cream, and how much butter will a gallon of cream yield? Describe the whole process of butter-making from the time the cream is placed in the churn.

2. Describe the construction, and mode of working, of the Jersey creamer. What are its advantages as compared with the ordinary methods of setting?

3. Describe an economical method of rearing calves up to the age of

six months. Sketch and give dimensions of a wooden building suitable for the rearing of 20 calves.

4. Describe the various systems of housing fattening cattle, noting their advantages and disadvantages. State the number of square feet of ground area per head of stock in each case. How much food and litter will a two-year-old bullock consume daily, and from your figures calculate the amount of farmyard manure that will be produced in six months?

5. What is meant by the absorptive power of soil? On what does it depend, and how may it be increased? Which soils show it most and which least? Which substances are most strongly absorbed, and which has the soil but little effect on? What influence has this property on the practice of manuring?

6. Describe the whole process of laying down heavy land to permanent pasture, and indicate the general management and treatment of the field during the first two years.

7. Give the details of the management of farmyard manure on a farm where a large stock of cows, horses, and pigs is kept.

8. Twenty large, well-bred half-bred hoggs are placed on turnips on 1st October. What weight of turnips, hay, and cake or grain will they consume before 1st March? How much will they have gained in live weight, and how many pounds of dressed mutton may each be expected to yield?

9. Give the identification, life-history, and preventive and remedial measures in the case of *Hypoderma bovis*.

AGRICULTURAL CHEMISTRY.

Thursday, 13*th October* 1892.—9 *to* 11 *o'clock*.

1. Explain the connection that exists between the chemical and the mechanical effects produced by good tillage.

2. Taking the case of a cereal crop, what are the principal elements of plant food which are taken up respectively from the soil itself, the atmosphere, and from specially applied manures, and in what relative order are these elements assimilated by the cereal crop?

3. What are the disadvantages attaching to the use of feeding materials of strongly distinctive chemical composition, and what the advantages of a mixed diet? Illustrate your reply from practice.

4. What are the benefits of littering cattle; how may they be increased or decreased in a chemical sense?

5. Give generally the composition of *Basic Slag*. On what kinds of soil is it most likely to be of value, and for what crops? To which of its constituents would you attach value, and how would you proceed to show this experimentally?

6. Discuss the following question:—Which practice removes most soil constituents off the land—that of fattening bullocks on grass, or that of feeding milking cows upon it?

Tuesday, 28th March 1893.—10 *to* 12 *o'clock.*

1. State the principal agencies at work in Soil formation, and give examples of the more conspicuous chemical changes involved in the process.

2. Give the composition—approximatively—of Atmospheric Air, and of Soil atmosphere, and state your opinion as to the causes of any observable difference.

3. How would you determine the total *available* constituents of a soil, and by what processes would you estimate—(*a*) The available Phosphoric Acid; (*b*) The available Potash; (*c*) The available Nitrogen Compounds?

4. What are the conspicuous differences in the ash constituents of Bean, Hay, and Mangel Crops? What artificial manures would you employ for these crops? Give your reasons for the variations you suggest in the treatment.

5. 3 Cwt. of potash salts per acre are to be applied: one half of the potash is to be derived from Kainit, and the balance from Commercial Muriate (containing $\text{K} = 50^{\circ}/_{\circ}\,\text{K}_2\text{O}$), how much of each salt is required?

6. What are the incompatibilities, if any, in the following mixtures?

1. Superphosphate and Nitrate of Soda.
2. Superphosphate and Ammonium Sulphate.
3. Slag Phosphate and Ammonium Sulphate.
4. Slag Phosphate and Superphosphate.
5. Superphosphate and Kainit.

7. Name the principal Amides found in plants, and state what is the outstanding feature in the composition of plants containing conspicuous proportions of Amido compounds.

8. Compare the chemical composition of Silage with the materials from which it is made.

9. Give the digestion co-efficients of the following Nutrients:—Proteids, Crude Fibre, Nitrogen-free extract, and Fat; and calculate, on the basis of these data, the albuminoid ratio of a fodder having the following composition:—Proteids, 13·20; Crude Fibre, 29·00; Fat, 2·90; Nitrogen-free extract, 48·37; Ash, 6·78.

VETERINARY HYGIENE.

Thursday, 13th October 1892.—1 *to* 3 *o'clock.*

1. State what chemical elements are necessary in the food of animals for the purpose of supplying material for the formation of bone and teeth, and also for the purpose of replacing the waste constantly going on in muscle, fat, and blood, and in the production of wool (in the sheep).

2. Given a patch of marshy land on a farm, state what kind of diseases you would expect to arise thereon, and what means you would adopt to render such a piece of land salubrious.

3. What evil effects would you expect to result from sewage contamination of the drinking water of animals, and what would be the effect of sewage grass in undue quantity on cattle and horses, and on pregnant and milch animals?

4. What is the cause of "sturdy" in sheep? Give the symptoms, and state what measures you would adopt for its prevention.

5. Give the temperature at which cowsheds and stables should be kept, and the amount of air-space required for a cow and horse respectively.

6. Describe the stomachs of the ox, and explain the process of rumination.

ENGINEERING.

Friday, 7th October 1892.—10 *to* 1 *o'clock.*

1. Express a statute acre in terms of (α) a square mile, (β) square chains, (γ) square yards.

The area of an enclosure is 9 acres, 2 roods, 37 poles. It is rectangular in shape, and one side is 9.94 chains long. Find the length of the adjacent sides.

2. Suppose A, B, C are three consecutive stations; that A is distant from B 1200 yds.; and B from C 2874 yds.; and that the bearing of A B is N. 23° 18′ W., and of B C, N. 72° 47′ E. Find, by calculation, the distance from A to C., and the bearing of A C. Having selected a suitable scale, check your results by construction.

3. Illustrate, by an example, the method of reducing levels by reference to the height of the axis of the instrument above datum.

4. What is meant by a "foot-pound" and a "horse-power"?

A train is to be driven at 42 miles an hour. If an engine developing 112 H.P. will just do this, what are the resistances against which the train moves?

5. If three co-planar forces acting on a body keep it at rest, what conditions must they fulfil?

A heavy uniform rod rests at an angle of 30° to the horizontal, in a smooth hemispherical bowl, 2 ft. diameter. Find the length of the rod.

6. What are the laws of friction between (α) solids, (β) solids and fluids?

A horse draws a load of 1 ton a horizontal distance of $\frac{1}{4}$ mile up a rough incline to a height of 200 feet. If the co-efficient of friction of the road be $\frac{1}{20}$, what amount of work does the horse do?

7. What is meant by the "elastic limit" and the "ultimate strength" of a structural material?

How much will a 2 in. square steel bar stretch under a pull of 40 tons? ($E = 29{,}000{,}000$.)

8. Mention the points of special importance that need attention in

the selection of the following, when employed for structural purposes:—Timber, Bricks, Cement, Sanitary Tubes.

9. An engine with a 5 ft. fly-wheel makes 120 revolutions a minute, and drives a thrashing machine at 850 revolutions a minute. What is the size of the thrashing machine pulley?

10. What are saturated, superheated, and wet steam, respectively? Why is there a loss in using wet steam? Define "thermal unit," and explain the method of measuring the latent heat of steam.

11. Stone-breaking machines usually contain a "toggle-joint." Explain the principle upon which its action depends.

12. Define "bending moment" and "shearing stress." A beam 12 ft. long supported at both ends, carries loads of 4 tons and 6 tons at 3 ft. and 8 ft. respectively from one end. Construct diagrams showing the bending moment and the shearing stress.

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

Monday, 27th March 1893.—1 *to* 4 *o'clock.*

1. A field, on a three chains to the inch plan, is represented by a triangle ABC, of which the side $AB = 3''$, $BC = 2·5''$, and $CA = 2·75''$. Calculate the area in acres, roods, and poles.

2. In a series of levelling operations six readings are taken, and the level is only moved once, namely, after the third reading. The readings being as follows:—8·62, 9·35, 12·21, 3·23, 4·56, and 3·79—enter and reduce them upon two different systems, and check the results in each case. Assume the reduced level at the first point to be 192·76.

3. Explain what contour lines are, and describe the method of conducting a contour survey.

4. If R is the resultant of two forces, P and Q, acting at A; assuming the parallelogram of forces—show that

$$R^2 = P^2 + Q^2 + 2PQ \times \cos.\ PAQ.$$

5. Describe briefly Bramah's Press.

If the diameter of the plunger is $\frac{3}{4}$ in., and that of the ram 15 in., and the arms of the lever handle 2 in. and 2 ft. respectively, what force must be applied to the end of the long arm of the lever to make the ram lift a load of 10 tons?

6. Explain what is meant by the "modulus," and by the "limit," elasticity of a material.

A bar of W. I. is ·5 in. sectional area, and 4 feet long. Supposin a load of 4 tons be attached to the bar, how much will it stretch (E = 29,000,000.)

7. What do you know about the behaviour of timber in connection with the seasoning process?

8. Distinguish between "centre of pressure" and "total pressure" as regards an area immersed in water. Find each for a lockgate 10 feet broad, and immersed to a depth of 12 feet.

9. What differences are there in the processes of production and in the physical properties of (α) wrought iron, (β) Bessemer steel, (γ) shear steel?

10. Exhibit, on a scale of $\frac{1}{48}$, line diagrams of a timber king and queen post truss, the one for a span of 36 ft., and the other for a 24 ft. span, and write their names against the different members.

11. What is a "mortice" wheel? Show by sketches how the teeth are fixed in the wheel-rim, and also how the segments of an ordinary spur fly-wheel may be joined.

12. What are the advantages of working steam engines expansively and with condensation?

The cylinder of a steam engine is 3 ft. 6 in. in diameter, the stroke 5 feet, and cut off is at one-third stroke. Assuming the cylinder steam-pressure is 45 lbs., what amount of work is done in one stroke? ($\log 3 = 1{\cdot}0986$.)

Note.—Answers should, as far as possible, be illustrated by sketches or diagrams.

Degrees in Science.

DOCTORS OF SCIENCE.

The names of all the Doctors of Science of this University, previously to 1889, will be found in the Historical Appendix to List of Graduates published in 1889, pp. 132-134. The following are the names of the Doctors from 1889 to 1893, both years included:—

DEPARTMENT OF MENTAL SCIENCE.

1891. William Mitchell, M.A.[1]
,, Robert Mark Wenley, M.A.
1892. Charles Mackinnon Douglas, M.A.[2]
,, James Lewis M'Intyre, B.A.
1893. William Ingram, M.A.

DEPARTMENT OF PHILOLOGY.

1893. Harry Angus Alexander Kennedy, M.A.

PHYSICAL AND NATURAL SCIENCE.

a. Department of the Mathematical Sciences.

1890. Alexander Crichton Mitchell.[3]

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[1] Lecturer, F.C. College, Aberdeen.

[2] Assistant to Professor of Moral Philosophy.

[3] Professor of Mathematics, Travancore.

b. Department of the Physical Experimental Sciences.

1889. Thomas Rhymer Marshall (Chemistry).
1890. Hugh Marshall.[1]
1891. William Cossar Mackenzie.[2]
,, Thomas Smith Murray.
1892. Jacques François Marais, B.A. (Chemistry).
1893. John Shields (Chemistry).

D. DEPARTMENT OF ENGINEERING.

1888. Archibald Campbell Elliott.[3]

E. DEPARTMENT OF PUBLIC HEALTH.

1890. James Anderson, M.D.
,, James Andrew Blair, M.B.
,, William John Brock, M.B.
,, John Stevenson, M.B.
1892. Charles Henry Bedford, M.D.[4]
,, Robert William Dickinson MacMartin Cameron, M.D., B.Sc.
,, Alexander Cruikshank Houston, M.B., C.M., B.Sc.
,, William George Aitchison Robertson, M.D., B.Sc.

Degrees Conferred in 1892-93.

THE DEGREE OF DOCTOR OF SCIENCE.

13th April 1893.

In the Department of Mental Science.

William Ingram, M.A.

Thesis—"The Function of Instinct and Emotion in the Development of the Practical Life."

In the Department of Philology.

Harry Angus Alexander Kennedy.

Thesis—"The Influence of the Septuagint on the Vocabulary of the New Testament, considered in Relation to the Colloquial Greek of the Period."

In the Department of Physical Experimental Science.

August 1892.

Jacques François Marais, B.A., B.Sc.

Thesis—"On the Derivatives of Amido-Tetrazolic Acid."

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[1] Assistant to Professor of Chemistry.

[2] Professor of Chemistry, Ghizeh, Egypt.

[3] Professor of Engineering, Cardiff.

[4] Surgeon-Captain H.M. Bengal Army.

13th April 1893.

John Shields, B.Sc., Ph.D.
Thesis—" On Hydrolysis."

In the Department of Public Health.

Robert William Dickinson MacMartin Cameron, M.D., B.Sc.
Thesis—" Personal Hygiene : Its Principles and its Scope in relation to Legislative Action ; or, the Interdependence of Personal and Public Health."

Alexander Cruikshank Houston, M.B., C.M., B.Sc.
Thesis—" Microbes in the Soil."

William George Aitchison Robertson, M.D., B.Sc.
Thesis—" Sugars and Sugary Foods."

THE DEGREE OF BACHELOR OF SCIENCE.

In the Department of the Mathematical Sciences.

13th April 1893.

Frank Spence, M.A.

In the Department of the Physical Experimental Sciences.

1st August 1892.

Frederick Beddow.
James William Horne.
John Alan Murray.
Charles Stewart.

13th April 1893.

Robert Fairbairn.
Bertram Prentice.

In the Department of the Natural Sciences.

1st August 1892.

John Smith Flett, M.A.
John Dow Fisher Gilchrist, M.A.
David Mount Hutton.
Robert Pollok, M.A.
Benjamin Lee Seawell.

In the Department of Engineering.

28th January 1893.

Robert Hylton Brown.

13th April 1893.

Geoffrey Scott Dalgleish.
Frank St John Gebbie.
John Lett Sealy Jeffares.
William Gerrard Rennie.

In the Department of Public Health.

1st August 1892.

Duncan William Currie, M.D.
John Howard-Jones, M.B., C.M.
Andrew William Messer, M.B., C.M.
Thomas Hugh Milroy, M.B., C.M.
Alexander Simpson, M.D.
John Sutherland, M.B., C.M.
John David Williams, M.D.
James Buchanan Young, M.B.

27th October.

Robert Martin Beattie, M.B.
John David Williams, M.B.

13th April 1893.

Walter Holland Ogilvie, M.B., C.M.

In the Department of Agriculture.

1st August 1892.

John Bayne, M.A.

27th October.

Richard Stedman Cunliffe.
James Little Duncan.
Louis Charles Seheult.
James Wilson, M.A.

26th November.

George Pearse Foaden.

13th April 1893.

Percy Barton Cunliffe.

Fellowship, Scholarships, Bursaries, Prizes, &c., in Science.

I.—FELLOWSHIP, &c.

THE FALCONER MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1869 by the Subscribers to the Fund for a Memorial to Hugh Falconer, M.D. (for many years Superintendent of the H. E. I. Company's Botanic Gardens at Suharunpoor and Calcutta), and the Association for the better Endowment of the University of Edinburgh. It is of the annual value of £111, 0s. 4d.; and is for the encouragement of the Study of Palæontology and Geology. It is tenable for two years, but if the Senatus see fit, it may be held for three years, and with consent of the University Court, for four years, and is awarded after competitive examination in Natural History as applied to Palæontology and Geology. It is open to Graduates in Science or Medicine of this University of not more than three years' standing at the time of the competition. It cannot be held along with any other

Fellowship, Scholarship, or Bursary in any Scottish University. The Deed of Foundation will be found at p. 270 of the CALENDAR for 1870-71. The next appointment will be made in July 1894.

1888. Malcolm Laurie, B.Sc.
1891. No award.
1892. *G. S. Corstorphine, B.Sc.*

THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see p. 280.

II.—SCHOLARSHIPS.

I.—BAXTER PHYSICAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865, and is of the annual value of £71, 7s. 10d., tenable for two years. By the terms of the Deed of Foundation (given in the CALENDAR for 1866-7, p. 203), it is awarded to the most eminent of the Bachelors of Science, who have passed their examinations in the Physical Sciences, including Experimental Philosophy and Chemistry, either in the year preceding a vacancy, or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this Scholarship is subject to the condition that the holder shall have taken the Degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100.

1887. Thos. B. Marshall, B.Sc. | 1890. Thos. Smith Murray, B.Sc.
1892. *James Rennie, B.Sc.*

II.—BAXTER NATURAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865, and is of the annual value of £71, 7s. 10d., tenable for two years. By the terms of the Deed of Foundation (given in the CALENDAR for 1866-67, p. 203), it is awarded to the most eminent of the Bachelors in Science, who have passed their examinations in the Department of the Natural Sciences, including Botany, Zoology, Physiology, and Geology, either in the year preceding a vacancy or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this Scholarship is subject to the condition that the holder shall have taken the Degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100.

1888. G. F. Scott-Elliot, B.Sc.
1890. Robert Murray Leslie, M.A., B.Sc.

1891. John Stewart Norwell, B.Sc., resigned.
,, Lapsed Scholarship, James Adamson, M.A., B.Sc.
1892. G. S. Corstorphine, B.Sc.
1893. Lapsed Scholarship, *Gregg Wilson, M.A.*

III.-VIII.—VANS DUNLOP SCHOLARSHIPS.

These Scholarships may be held by Science Students. They are each of the annual value of £100, and are tenable for three years, on condition that the scholar submits annually—(1.) A certificate of attendance on lectures or laboratories approved by the Senatus; or (2) a certificate of having acted as an assistant to a Professor in this or some other University; or (3) a written report of his work done during the year, together with a Thesis composed by himself in connection with some part of that work.

III.—MATHEMATICS.[1]

The next Competition will take place in April 1895.

IV.—NATURAL PHILOSOPHY.[1]

The next Competition will take place in April 1895.

V.—AGRICULTURE AND RURAL ECONOMY.[1]

The next Competition will take place in March or April 1895.

VI.—CHEMISTRY AND CHEMICAL PHARMACY.[2]

The next Competition will take place in April 1894.

VII.—NATURAL HISTORY, INCLUDING GEOLOGY AND BOTANY.[2]

The next Competition will take place in April 1895.

VIII.—ENGINEERING AND MECHANICAL AND USEFUL ARTS.[1]

The next Competition will take place in April 1894.

IX.—STEVEN SCHOLARSHIP.[1]

Is awarded annually in March.

X.—HOPE PRIZE SCHOLARSHIP.[2]

Is awarded annually in March.

XI.—NEIL ARNOTT SCHOLARSHIP IN EXPERIMENTAL PHYSICS.[1]

Is awarded annually in April.

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[1] For particulars, see "Scholarships" in Faculty of Arts.
[2] For particulars, see "Scholarships" in Faculty of Medicine

XII.—THE MACKAY SMITH SCHOLARSHIPS.

These Scholarships were at first intended to have been held in Edinburgh and Glasgow Universities alternately, and were so held in Edinburgh for the Sessions 1883-84 and 1884-85, and in Glasgow for the Sessions 1885-86 and 1886-87. It was, however, afterwards arranged, instead of the Scholarships alternating between the two Universities, that the proceeds of the present investment should be divided—one half being retained by the Senatus of the University of Edinburgh, and the other half transferred to the Senate of the University of Glasgow, so that each University now acts independently. The portion of the proceeds at present falling to Edinburgh is £50 annually, which provides one Scholarship in Natural Philosophy and one in Chemistry, each of the annual value of £25, tenable for two years, and to be held under such regulations and conditions as the Senatus may from time to time direct. The Scholarship in Natural Philosophy is open for competition to Students who have attended the Class of Natural Philosophy, and the Scholarship in Chemistry to Students who have attended the Class of Chemistry, both in this University. The successful Candidate for the Scholarship in Natural Philosophy is bound to attend the Class of Natural Philosophy, or to prosecute the study thereof, in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve ; and the Scholarship in Chemistry is held under similar conditions as regards attendance on the Class of Chemistry, or the prosecution of the study thereof. The next Competition for these Scholarships will take place at the end of the Winter Session 1893-94.

1888. Martin H. Feye (Chem.)
A.W. Duff, M.A. (Nat. Ph.)
1889. J. F. M'Kean, M.A. (lapsed Nat. Phil.)
1890. R. W. Briggs (Chem.)
James Holm (Nat. Phil.)
1892. *J. W. Horne*, M.A. (Chem.)
1892. *J. G. Anderson* (Nat. Phil.)

XIII.—ROYAL COMMISSION FOR EXHIBITION OF 1851 PHYSICAL SCIENCE SCHOLARSHIP.

The Commissioners in 1891, and again in 1892, gave this University the power of nominating a Student of not less than three years' standing to a Scholarship of £150 a-year, tenable for two years, and which may be extended to three years. The Scholarship is limited to those branches of Science (such as Physics, Mechanics, and Chemistry) the extension of which is specially important for the national industries, and may be tenable in any University or other Institution to be approved by the Commissioners. See Regulations, p. 544 of CALENDAR for 1891-92.

1891. *John Shields, B.Sc., Ph.D.*
1892. *Andrew J. Herbertson.*
1893. Recommended—*H. W. Bolam, B.Sc.*

XIV.—THE ARTHUR TREVELYAN SCHOLARSHIP IN ENGINEERING.

The Arthur Trevelyan Scholarship in Engineering, of about £40 per annum, is for proficiency in Engineering and the Mechanical and useful Arts, under such conditions as the Senatus may prescribe. See Excerpt from Deed, page 538 of CALENDAR for 1892-93.

Of the foregoing Fellowship, Scholarships, Bursaries, and Prizes, the following are open during the Winter Session 1893-94.[1]

SCHOLARSHIPS.[1], [2]

1. *The Vans Dunlop Scholarship in Chemistry and Chemical Pharmacy* (XI., page 511).—The next Competition will take place on 26th April 1894, at 10 and 1 o'clock. Names of Candidates to be given in, and Certificates shown, not later than 1st March.
2. *The Vans Dunlop Scholarship in Engineering and Mechanical and Useful Arts* (XXX., pages 274 and 282).
3. *Steven Scholarship in Agriculture* (XLV., page 277).
4. *The Mackay Smith Scholarship in Natural Philosophy* (XII., page 618). The Examination will take place at the same time as the Examination in Natural Philosophy for the Degree of M.A., with Honours (7th and 9th April). Names to be entered at the Matriculation Office on or before 16th March.
5. *The Mackay Smith Scholarship in Chemistry* (XII., page 618). Examination 20th March 1894, at 10 A.M. Names of Candidates to be entered at Faculty of Medicine Office on or before 16th March.
6. *A Hope Prize Scholarship* (XVII., page 513).
7. *Neil Arnott Scholarship for Experimental Physics* (XXIV., page 272).

Competitors for Fellowships and Scholarships must have studied the subjects of Examination at the University of Edinburgh. No Fellowship or Scholarship can be held along with any other Fellowship or Scholarship.

BURSARIES.[3]

1-2. *Two Sibbald Bursaries*, of £30 a year, tenable for three years (LI., page 258).

3-8. *Six Heriot Bursaries*, each of the annual value of £30, and tenable for three years (I., page 253).

9. *Renton Bursary*, of about £18, 8s. (LXX., page 261).

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[1] *N.B.*—The values of Fellowship, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c.

[2] For further particulars, see "Scholarships" in Faculties of Arts and Medicine.

[3] For further particulars, see "Bursaries" in Faculty of Arts.

10. *The Donald Fraser Bursary*, of £50, for high merit in the University Class of Natural Philosophy combined with proficiency in Laboratory Work, is awarded annually at the end of the Winter Session (see LXXXII., page 264).

11. *Jamieson Bursary*, of about £26 a year, tenable for four years, open to sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any of the parishes of Crawfordjohn, Crawford, Lamington and Wandell, Wiston and Roberton, Culter and Biggar. Competition commences 2nd October. Names of Candidates to be intimated before 22nd September.

University Bursaries cannot be held along with any other Bursary.

PRIZES.[1]

1. *The Gunning Victoria Jubilee Prizes in Physiology and Botany* (XI., 521).

2, 3. *Two Newton Bursaries or Prizes* (LXXII., page 262),—one for proficiency in the Senior (Second) Class of Mathematics, and one in the Junior Class of Natural Philosophy.

4. *The Kelland Memorial Prize* of about £4, 10s. (VIII., 266 and 283).

5. *The Lord Rector's Prize*, of twenty-five guineas (2, page 283).

6. *Three Gray Prizes* (6, 7, 8, page 283).

WILLIAM DICKSON TRAVELLING FUND.

The William Dickson Travelling Fund (page 280).

N.B.—*Scholars, Bursars, or Fellows must apply to the Convener of the Science Degrees Committee, for Certificates to entitle them to draw the instalments due of Science Scholarships, and to the Factor for payment thereof, within three months after they have become payable, otherwise they will be regarded as having resigned. Any who desire to resign must at once announce this to the Convener and to the Factor.*

JAMES GEIKIE, D.C.L., LL.D., F.R.S., &c.,
Convener of the Science Degrees Committee.

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[1] For further particulars, see "Prizes" in Faculties of Arts and Medicine

Benefactors of the University.

THE Revenues of the University were formerly scanty and very inadequate for the encouragement of the higher education and learning in the Scottish metropolis. Scholarships and Fellowships were unknown prior to those recently instituted, and the emoluments of several of the Chairs are still greatly inferior to those in many other Universities.

During the early period of its history, the University received a considerable number of small donations and bequests, chiefly for Bursaries. Notices of these will be found in the preceding pages, in the Histories of the University by Bower, Dalzel, and Grant, and in the Report of the Universities' Commissioners in 1830. A list of early Benefactors to the Library is given at p. 49.

By Act 1 & 2 Vict., cap. 55, the various sums of money mortified in the hands of the Town Council for the support of the University, amounting to £13,119, were discharged, and an annual payment of £2500 (since reduced to £2170), secured upon the revenues of Leith Docks, is assigned to the University for the purposes of these bequests.

Within the present century, but especially since the year 1860, many donations and bequests have been made for Fellowships, Scholarships, and Bursaries, for the endowment of Chairs, and for the New Buildings, which will shortly be completed by the erection of the great "M'Ewan Hall." As the University, however, is still in many respects very inadequately endowed, much still requires to be done in order that it may not fall behind the requirements of the age. It is therefore hoped that the generosity of future donors will remedy this defect, and be directed towards the improvement of the Library, the augmentation of the General Fund, and various other academical purposes. Intending Benefactors are respectfully reminded that additional Chairs, Lectureships, Supplementary Endowments for existing Chairs and Lectureships, Scholarships for many branches of scientific research, and contributions to the University Fund for general purposes, besides ordinary Bursaries and Prizes, are still urgently required. The wishes of Donors and Testators are in every case scrupulously observed, and their names, if so desired, may always be connected with any Benefaction they may bestow. Such Benefactions may simply be conveyed to the "University of Edinburgh," and full powers of ordinary administration should be conferred upon the University authorities. All necessary information will be gladly afforded by the Office-bearers of the University. The following list includes the chief Benefactors of the present century, together with the purposes of their benefactions[1] :--

(A.)—*Founders of Bursaries in the present Century.*

Rev. J. STEWART, South Carolina--Founder of the Stewart Bursaries.

Sir JOHN M'PHERSON, late Governor-General of India—Founder of the M'Pherson Bursary.

Rev. R. BLAIR, D.D.—Founder of the Blair Bursaries in Arts and Theology,

J. STEWART HEPBURN, Esq. of Colquhalzie—Founder of three Theological Bursaries.

JOHN JAMIESON, Esq., Edinburgh—Founder of the Jamieson Bursary.

GEORGE PARKER BIDDER, Esq.—Founder of the Jardine Bursary.

WILLIAM LENNIE, Esq., Teacher, Edinburgh—Founder of the Lennie Bursaries.

JOHN BRUCE, Esq., Trinity Crescent, Edinburgh—Founder of the Bruce Bursaries.

M'DIARMID TESTIMONIAL TRUSTEES—Founders of the M'Diarmid Bursary.

W. PATRICK, Esq. of Roughwood—Founder of the Patrick Bursaries.

JAMES GRAY, Esq. of Baadpark—Founder of the Gray Bursaries.

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[1] An Association exists for the purpose of promoting—1st, The Foundation of Scholarships and Fellowships for the encouragement of the higher learning among the more advanced Students; 2d, The better Endowment of existing Chairs; 3d, The Foundation of new Professorships; and 4th, Other University objects.

The Chancellor of the University is President of this Association; the Hon. Secretary is Sir Alexander Christison, Bart.; and the Acting Secretary is Robert G. Scott, Esq., W.S., 61 Castle Street, Edinburgh.

EDINBURGH CAITHNESS ASSOCIATION—Founders of a Bursary.

EDINBURGH GALLOWAY ASSOCIATION—Founders of a Bursary.

AYRSHIRE CLUB—Founders of two Bursaries.

PEEBLES-SHIRE SOCIETY—Founders of a Bursary.

Dr ABERCROMBIE, Cape Town—Founder of a Bursary.

Mrs MARGT. TYNDALL BRUCE of Falkland—Founder of Bursaries.

TRUSTEES of FRANCIS J. SCOTT, Esq. of Mount Lodge, Portobello—Founders of two Bursaries.

Miss HANNAH HARRISON of Lasswade—Founder of a Bursary.

Miss MARY ETTLES of Inverness—Founder of three Bursaries, and the "Ettles Medical Scholarship."

TRUSTEES of the Rev. JOHN SPENCE, Minister of Kinnaird—Founders of two Bursaries.

JOHN ROBERTSON SIBBALD, M.D.—Founder of Five Bursaries.

ARGYLLSHIRE, BUTE, and WESTERN ISLES ASSOCIATIONS—Founders of a Bursary.

SUBSCRIBERS to MEMORIAL to ROBERT STEWART, Esq. of Ardvorlich—Founders of a Bursary.

THE EDINBURGH BORDER COUNTIES ASSOCIATION—Founders of two Bursaries.

THE RIGHT HON. THOMAS, EARL OF ZETLAND—Founder of the Orkney and Zetland Bursary.

TRUSTEES OF JAMES GRIERSON, OF OGSCASTLE—Founders of the Grierson Bursaries.

TRUSTEES OF Dr MACKIE, Leith—Founders of Mackie Bursaries.

TRUSTEES of J. CAIRNS, Esq., W.S.—Founder of the Cairns Bursary.

TRUSTEES OF Mrs JOHNSTONE of Harthope, Moffat—Founders of the Johnstone of Harthope Bursary,

TRUSTEES OF JAMES LAMBERT, Esq., Alloa—Founder of the Lambert Bursary.

ROBERT MARSHALL, Esq., Merchant, Edinburgh—Founder of the Marshall Bursary.

JOHN FOTHRINGHAM, Esq. of Heathpool—Founder of the Fothringham and Forrest Bursaries.

Right Hon. LAWRENCE, EARL OF ZETLAND—Founder of the Zetland Bursaries.

ANDREW THOMSON, M.D.—Founder of Eight Bursaries in Arts, Divinity, Law, and Medicine.

EDINBURGH EAST LOTHIAN ASSOCIATION—Founders of a Bursary in Arts.

EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION—Founders of Six Bursaries in Arts.

Mrs ISABELLA WEBSTER—Founder of the Webster Bursaries in Divinity.

Dr JOHN AITKEN CARLYLE—Founder of two Bursaries in the Faculty of Medicine.

Mrs ELIZABETH MACKENZIE—Founder of the Mackenzie Bursaries.

Dr JOHN MUIR—Founder of a Classical Bursary.

TRUSTEES OF Mrs BARBARA MACAULAY OR MYLNE—Founders of a Bursary in Divinity.

TRUSTEES OF Rev. JOHN PATTERSON—Founders of a Bursary in Anglo-Saxon Grammar and Literature.

THOMAS CARLYLE—Founder of the John Welsh Bursaries in Mathematics and Classics.

Mrs HELEN ANDERSON or RONALD, Liverpool—Founder of the Anderson Bursaries.

SUBSCRIBERS to Testimonial to W. MACKINNON, Esq. of Balinakill—Founders of the Mackinnon Bursaries.

TRUSTEES of JAMES WHITELAW—Founders of Whitelaw Bursaries.

TRUSTEES of WILLIAM RENTON, Esq.—Founders of a Bursary in Divinity, and one in Arts.

Miss ISABELLA MACDOUGALL, Perth—Founder of the John and Isabella Macdougall Bursaries.

ROBERT HUNTER, Esq., Dalhousie Chesters—Founder of two Bursaries in Divinity.

ROBERT PILLANS NEWTON of Castlandhill and Drumcross—Founder of the Newton Bursaries.

PETER CAMPBELL MANN of Seaham Harbour, Durham—Founder of a Bursary.

CHARLES JARDINE of Thorlieshope—Founder of Bursaries in Arts.

ISAAC ANDERSON HENRY—Founder of the Anderson Henry Prize.

Mrs H. E. MORISON—Founder of the Mackenzie (Stornoway) Bursary.

DANIEL MACLAURIN, Esq.—Founder of the Maclaurin Bursary.

THOMAS LOCKERBY, Esq.—Founder of the Lockerby Bursary.

GEORGE COUSIN, Esq.—Founder of the "Bailie Cousin Bursary."

THOMAS HILL PATTISON, M.D.—Founder of a Bursary in the Faculty of Medicine.

Major ROBERT ORR CRICHTON of Lynn—Founder of the Crichton Bursaries in the Faculty of Medicine.

Rev. THOMAS MAULE—Founder of Maule's Bursaries.

Mrs A. B. R. MILNER FOTHERGILL of Hayton Quarry—Founder of the Milner Fothergill Gold Medal in Therapeutics.

DONALD FRASER, M.D., London, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the Donald Fraser Bursary in Experimental Physics.

SUBSCRIBERS TO MEMORIAL TO PROFESSOR KELLAND—Founders of Kelland Memorial Prize.

(B.)—*Founders of Scholarships or Fellowships in the present Century.*

THE PITT CLUB—Founders of two Scholarships, one in Arts and one in Divinity.

JAMES MACKENZIE, Esq., W.S.—Founder of Mackenzie Scholarship.

ALEX. HENRY RHIND, Esq. of Sibster—Founder of the Rhind Scholarships and Bursaries.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Baxter Scholarships in Arts and Sciences.

Sir WILLIAM FETTES, Bart.—Founder of the Fettes Exhibitions.

JOHN MAXTON, Esq.—Founder of a Divinity Scholarship.

Miss ELIZABETH DRUMMOND—Founder of the Drummond Scholarship.

Mrs MARGARET TYNDALL BRUCE—Founder of three Scholarships.

JAMES GUTHRIE, Esq., of London—Founder of the Guthrie Fellowship.

SUBSCRIBERS to HAMILTON MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Philosophical Fellowship.

ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Classical Fellowship.

TRUSTEES of Dr J. H. GILCHRIST—Founders of three Scholarships for Natives of India.

JOHN ROBERTSON SIBBALD, M.D.—Founder of a Medical Scholarship.

Miss MARY BAXTER, of Balgavies—Founder of a Scholarship.

SUBSCRIBERS to FALCONER MEMORIAL FUND—Founders of a Fellowship.

SUBSCRIBERS to SYME FELLOWSHIP—Founders of a Fellowship in the Medical Faculty.

SUBSCRIBERS to GOODSIR MEMORIAL—Founders of a Prize and eventually a Fellowship in the Medical Faculty.

TRUSTEES OF Mrs CHARLES MACLAREN—Founders of the Charles Maclaren Scholarship.

SUBSCRIBERS to GLOVER MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the "Glover Divinity Scholarship."

Mrs M. ARNOTT, Widow of NEIL ARNOTT, M.D.—Founder of the "Neil Arnott Scholarship for Experimental Physics."

JOHN EDWARD BAXTER, Esq. of Craigtay, bequeathed the residue of his estate, out of which three Scholarships named after him have been founded by the University Endowment Association.

The Rev. DAVID AITKEN, D.D., formerly Minister of Minto—Founder of the Aitken Scholarship.

DAVID SKIRVING, Esq., of 13 Westbourne Park, London—Founder of the Skirving Scholarship for Moral Philosophy.

ANDREW THOMSON, M.D.—Founder of a Scholarship.

Misses KIDD of Woodhouse—Founders of the David Kidd Divinity Scholarship.

Dr R. H. GUNNING of Rio Janeiro—Founder of two Scholarships and a Fellowship in the Faculty of Divinity, and of eleven Prizes in the Faculty of Medicine.

DR T. LECKIE—Founder of the Leckie-Mactier Scholarship.

SUBSCRIBERS TO MEMORIAL OF Dr COLDSTREAM—Founders of the Coldstream Memorial Medical Missionary Scholarship.

Mrs JAMES BUCHANAN—Founder of a Scholarship in Midwifery and Gynecology.

Dr ANDREW VANS DUNLOP, H.E.I.C.—Founder of the Vans Dunlop Scholarships in Arts, Law, and Medicine.

Misses STEVEN of Bellahouston—Founders of a Scholarship in Agriculture.

SUBSCRIBERS TO MEMORIAL OF Dr CHARLES MURCHISON—Founders of the "Charles Murchison Scholarship."

Mrs MARY ANN SCOTT or THOMSON of Hawick—Founder of the James Scott Scholarship in Midwifery.

ROBERT MACKAY-SMITH, Esq., Edinburgh—Founder of the Mackay-Smith Scholarships in Natural Philosophy and Chemistry.

Dr FREDERICK JOHN MOUAT—Founder of the Mouat Scholarship in Practice of Physic.

Dr JOHN STARK, Auchtermuchty—Founder of the Stark Scholarship in Clinical Medicine.

Mrs KIDD—Founder of "James Fairbairn's Scholarship."

Miss JANE JEFFREY—Founder of the Jeffrey Scholarships.

Dr A. H. FREELAND BARBOUR—Founder of the Freeland Barbour Fellowship.

Miss MATILDA JOHNSTON COBB—Founder of the Cobb Divinity Scholarship.

Mrs ELIZABETH MACKIE or TREVELYAN—Founder of Scholarship in Engineering and Mechanical and Useful Arts.

Mrs MUIRHEAD—Founder of Prize in Civil Law Class.

SUBSCRIBERS TO LORIMER MEMORIAL FUND AND ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY—Founders of the Lorimer Travelling Scholarship.

(C.)—*Founders of New Chairs, Contributors of Endowments to existing Chairs, or of Money, &c., to the University Funds, Library, &c., within the present Century.*

General JOHN REID—Founder of the Theory of Music Chair, who also bequeathed money to the Funds of the University.

General Sir JOSEPH STRATON—Bequest to the University Funds.

Sir JAMES ERSKINE, of Torry, bequeathed Pictures, Bronzes, and Marbles to the University. [Lent to the National Gallery.]

Sir WILLIAM PULTENEY—Founder of the Chair of Agriculture.

Dr WILLIAM THOMSON—Founder of the Thomsonian Lectureship in Mineralogy.

Dr THOMAS CHARLES HOPE, late Professor of Chemistry—Founder of the Hope Prize.

Sir GEORGE BALLINGALL, late Professor of Military Surgery—Presented his Library to the University.

Dr W. P. ALISON, late Professor of the Theory of Medicine—Presented his Medical Books to the University.

JOHN MUIR, D.C.L., LL.D., Edinburgh—Founder of Sanskrit Chair.

Mrs MARGARET TYNDALL BRUCE—Founder of Prize in Logic Class.

DANIEL ELLIS, Esq.—Founder of "The Ellis Prize" in the Faculty of Medicine.

JOHN EDWARD BAXTER, Esq., of Craigtay, bequeathed the reversion of his Estate for the purpose of founding Scholarships, etc.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Chair of Engineering.

DAVID COWAN, Esq., of Auchendrane, bequeathed £1000 to the Association for Promoting the Endowment of the University.

Dr NEIL ARNOTT gave £1000 for Promoting the Study of Experimental Physics among the Medical Students of the University.

Sir RODERICK IMPEY MURCHISON gave £6000 for the Endowment of the Chair of Geology.

J. O. HALLIWELL PHILLIPPS, Esq., presented his valuable Shakespearean Collection to the University.

ROBERT COX, Esq., W.S., bequeathed £5000 for general purposes and for completing the Dome of the University buildings.

Signor THEOPHILE BUCHER bequeathed his Music Library to the Chair of Music, and reversion of estate to found Scholarships in Music.

THE MERCHANT COMPANY OF EDINBURGH, and other Governors of George Watson's and Daniel Stewart's Hospitals—Founders of the Chair of Political Economy and Commercial Law.

Mr HENRY G. and Miss FRANCES WATSON—Donors of Fund for the "Watson-Gordon Professorship of Fine Art." The Deed of Foundation will be found in CALENDAR for 1873-74, p. 320.

Sir D. BAXTER, of Kilmaron, bequeathed £20,000 for the Extension of the University buildings, and £20,000 for the Further Endowment of the Chairs in the Faculty of Arts.

Miss BROWN, of Lanfine, presented a portion of the Minerals and Fossils which belonged to her father—to be called "The Waterhaugh Collection."

Rev. HEW SCOTT of Wester Anstruther—Founder of the Scott and Dunbar Prize in Greek.

JOHN WILSON, Esq. of South Bantaskine—Founder of the Robert Wilson Prize in Chemistry.

Mrs E. WIGHTMAN—Founder of the Wightman Prize in Clinical Medicine.

THE BELL TRUSTEES, who gave £6000 for the Endowment of the Bell Chair of the Theory, History, and Practice of Education. (Endowment increased in 1886 by £4500, added by Educational Endowments Commission.)

JOHN B. BAILLIE, who transferred the collection of Arabic MSS., formed by Lieut.-Col. Baillie of Leys, to the University Library.

JAMES GEORGE BEANEY, Esq.—Founder of the Beaney Prize.

ANDREW ROBERTSON CAMERON, M.D., of Richmond, New South Wales—Founder of the Cameron Prize.

Dr DAVID LAING, bequeathed his MSS. to the University Library.

Mrs HODGSON, presented Works on Political Economy, collected by her late husband, Prof. Hodgson, to the University Library.

Dr VANS DUNLOP bequeathed £3000 to the General Fund of the University.

SUBSCRIBERS to the CELTIC CHAIR, by whom a fund of £14,000 was raised for the endowment of this Chair by the exertions of Professor Blackie.

Miss MARY DICK bequeathed a moiety of the residue of her estate to accumulate for twenty-one years from 1883, or till it shall amount to £10,000, for the Foundation of a Chair of Comparative or Surgical Anatomy, as considered most to be required.

SUBSCRIBERS of £500 and upwards to the "UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME":—[1]

The late Sir David Baxter of Kilmaron, Bart., by bequest, less Legacy Duty,	£18,000	0	0
William M'Ewan, Esq., M.P.,	6,500	0	0
The late Duke of Buccleuch and Queensbery, K.G., D.C.L., LL.D.,	4,000	0	0
The Magistrates and Council of the City of Edinburgh,	3,100	0	0
The Right Hon. the Earl of Moray,	2,525	0	0
The Right Hon. The Earl of Rosebery, LL.D.,	2,400	0	0
The Royal College of Physicians of Edinburgh,	1,575	0	0
The Right Hon. the Earl of Stair, K.T.,	1,500	0	0
Messrs John Jeffrey & Co.,	1,500	0	0
The late J. Fulton, Esq., Clinton Road,	1,150	0	0
Charles Andrew Aitchison, Esq., Queen Street,	1,050	0	0
The Most Hon. the Marquis of Bute,	1,000	0	0
Andrew Carnegie, Esq., New York and Pittsburg,	1,000	0	0
The Right Hon. the Earl of Derby,	1,000	0	0
J. R. Findlay, Esq., Rothesay Terrace,	1,000	0	0
The Right Hon. The Earl of Home,	1,000	0	0
The Right Hon. The Earl of Hopetoun,	1,000	0	0
The late Sir William Stirling-Maxwell of Pollok and Keir, Bart., LL.D., M.P.,	1,000	0	0
The Right Hon. The Earl of Wemyss and March, LL.D.,	1,000	0	0
The Right Hon. the Lord Justice-General, D.C.L., LL.D., Chancellor of the University,	800	0	0
Messrs Thomas Nelson & Sons,	800	0	0
The late Henry George Watson, Esq., C.A.,	800	0	0
The Most Hon. the Marquis of Lothian,	750	0	0
The Society of Writers to the Signet,	750	0	0
J. Lindsay Bennet, Esq., Taviton Street, London,	710	0	0
James Cowan, Esq., Royal Terrace,	700	0	0
Robert Richardson, Esq., Bruntsfield Place,	700	0	0
C. Morrison, Esq. of Islay,	700	0	0
C. Jenner, Esq.,	650	0	0
The late David Anderson, Esq., of Moredun,	600	0	0

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[1] See Statement of Funds in Calendar, 1889-90, Appendix, p. 22.

James H. Renton, Esq., Park Lane, London,	£600	0	0
Professor Sir W. Turner, LL.D.,	600	0	0
The Most Hon. The Marquis of Hartington,	500	0	0
Charles Cowan, Esq., of Logan House,	500	0	0
T. R. Buchanan, Esq., M.P.,	500	0	0
P. D. Swan, Esq., Provost of Kirkcaldy,	500	0	0
Lady Campbell of Garscube,	500	0	0
The late William Cumming, Esq., M.D., Ainslie Place,	500	0	0
The late James T. Gibson-Craig, Esq., York Place,	500	0	0
Professor Crum Brown,	500	0	0
The Goldsmiths' Company of London,	500	0	0
W. Mackinnon, Esq., of Balinakill and Loup,	500	0	0
The late Graham Menzies, Esq. of Hallyburton,	500	0	0
John Graham Menzies, Esq., Grosvenor Crescent,	500	0	0
W. D. Menzies, Esq., Grosvenor Crescent,	500	0	0
The late Miss Trail, Aberlady, by bequest,	500	0	0
Messrs William Younger & Co., Abbey Brewery,	500	0	0
The Right Hon. The Earl of Zetland,	500	0	0
Anonymous,	500	0	0

The total amount of subscriptions received was £149,048, 2s. 5d.

EARL OF ROSEBERY provided £50 a year for Lectureship on Philosophy of Natural History for five years.

WILLIAM F. CUMMING, M.D., presented a Drinking Fountain, erected in the Quadrangle of the Old Buildings, in 1886.

JOHN HOPE, W.S., presented a Drinking Fountain to the University New Buildings, 1886.

ALEX. GIBSON, Esq., Advocate, bequeathed £2000, free of legacy-duty, to the General Fund of the University.

WILLIAM M'EWAN, Esq., M.P., founder of the M'Ewan University Hall. *See* end of Appendix.

ADAM GIFFORD, Senator of the College of Justice, bequeathed £25,000 for the foundation of a Lectureship for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.

JOHN FULTON, Esq., bequeathed £3000 to General University Fund, the greater part of which has been devoted to the equipment of the new Engineering Laboratory, called the "Fulton Laboratory."

Miss ELIZABETH STEVEN, of Bellahouston—Founder of the Steven Lectureship in connection with the Chair of Agriculture.

BEQUESTS AND DONATIONS DURING 1892-93.

I. *Bequests.*

T. H. Pattison, M.D., for Endowment of a Bursary in the Faculty of Medicine, £350 (to account).

II. *Donations.*

Sum of £640, 8s. 8d. raised by subscription, together with a contribution of £600 from the funds of the Association for the Better Endowment of the University of Edinburgh, for the Foundation and Endowment of "The Lorimer Travelling Scholarship" in the Faculty of Law, to commemorate the services to the University and to legal science, of the late Professor James Lorimer.

Donations to Library.

Besides various valuable contributions from the Governments of Great Britain, Canada, France, India, Italy, New South Wales, New Zealand, Norway and Sweden, Russia, Victoria, &c., the University Library has in the course of the year 1892-93 received Donations from the following Universities:—Aberdeen, Aix-la-Chapelle, Andover, Basle, Birmingham, Bologna, Bombay, Budapest, Buenos Aires, California, Christiania, Cornell, Dundee, Glasgow, Groningen, Greifswald, Harvard, Heidelberg, Johns Hopkins, Kiel, Königsberg, Lahore, Leyden, Madras, Madrid, Manitoba, New York, Rome, Rostock, Toronto, Turin, Utrecht, Venezuela, Warsaw, Yale, Zaragoza. Many other public institutions at home and abroad have also sent their publications:—The Royal Society of Edinburgh; the Royal Scottish Geographical Society, Edinburgh; the Society of Scottish Antiquaries; the Royal Observatory, Edinburgh; the Physical Society, Edinburgh; the Church of Scotland Offices, Edinburgh; the Fishery Board for Scotland; the Highland and Agricultural Society; the Glasgow Archæological Society; the Royal Irish Academy; the British Museum; the Science and Art Department, South Kensington; the Royal Geographical Society, London; the Astronomical Society, London; the Greenwich Observatory; the Solar Physics Committee; the Musical Association, London; the Birmingham Philosophical Society; the Musée Guimet; the Société Finno-Ougrienne; the Smithsonian Institution; the United States National Museum; the Museum of Comparative Zoology, Harvard; the Royal Society, Victoria; the Australian Museum, Sydney; the New Zealand Institute; the Canadian Institute; the Geological Survey of the United States; the Geological Survey of Minnesota; the Geological Survey of India; the Geological Survey of Canada; the Archæological Survey of India; the Medical and Physical Society of Bombay; the Department of Agriculture, Michigan; the Botanic Gardens, Calcutta; the Botanic Gardens, Jamaica; the International Medical Congress; the Trustees of the Gifford Lectureship; the Trustees of the Baird Lectures; the Trustees of the Hibbert

Lectures; the English Guernsey Cattle Society; the Devon Cattle Breeders' Society; the Polled Cattle Society; the Highland Cattle Society of Scotland; the Shropshire Sheepbreeders' Association; the Hunters' Improvement Society; the Yorkshire Coach Horse Society, &c., &c.

Among the numerous private donors to whose liberality the Library has been indebted, the first place must be assigned to Sir David P. Chalmers, who, in accordance with the understood wish of his father-in-law, the late Professor Lorimer, presented to the Library several hundred volumes, mainly dealing with International Law, which are to be kept together as the **Lorimer Collection.**

Among other private donors may be mentioned :—

Lord Lothian—The genus Masdevallia (continuation).
Principal Sir William Muir—The Caliphate, 2nd ed., and various Oriental Works and Philological Magazines.
Professor Laurie—Teachers' Guild Addresses, and Institutes of Education.
Professor Calderwood—Evolution and Man's place in Nature.
Professor Cossar Ewart—Various papers dealing with the Skate and other Elasmobranchs.
Professor Luigi Bodio—Numerous Statistical Works.
Signor A. B. Mantinez—Annuario estadistico de la Ciudad de Buenos Ayres.
Mr Gifford—Life of Lord Gifford.
Mrs Howard—Henry Howard, Dean of Lichfield, The Books of Numbers and Deuteronomy.
Mr James Colston—The Guildry of Edinburgh; The Town and Port of Leith; The Incorporated Trades of Edinburgh.
Messrs Gresswell—The Veterinary Pharmacopœia; Description of the Physiological Action of Medicine; and other publications.
Mr David Douglas—Bell, The Scottish Deerhound.
Messrs W. & R. Chambers—Chambers' Encyclopædia (continuation).
Mr F. A. Crisp—Parish Register of Greensted, Essex.
Mrs A. Simpson—Visions.
Mr C. M'Vail, M.D.—County Council Reports, &c.
A Friend of International Progress—Hunter, Bombay, 1885 to 1890.
Sir Edward Fry—Treatise on the Specific Performance of Contracts; The Doctrine of Election; On Mosses.
Mr H. J. Fry—Essays, lectures, and stories.
Mr Wylobicki—Soboleski, Poets and Poetry of Poland.
Messrs John Wright & Co.—The Medical Annual.
Trustees of Professor Robert Grant—The Second Glasgow Catalogue of 2156 stars, 1892.

Abstract of Accounts of the University

FOR THE YEAR ENDING 31ST AUGUST 1892.

ANNUAL SALARIES (EXCLUSIVE OF CLASS FEES) ATTACHED TO THE OFFICE OF PRINCIPAL, AND TO THE PROFESSORSHIPS, ASSISTANTSHIPS, AND EXAMINERSHIPS IN THE UNIVERSITY, BY ORDINANCE OF UNIVERSITIES COMMISSIONERS AND SUBSEQUENT DEEDS OF FOUNDATION.

PRINCIPAL.

Salary (besides Official Residence), - £1000 0 0

FACULTY OF ARTS.

	Salaries of Professors.	Salaries of Assistants.	Allowances for Class Expenses
Humanity	£239 5 0	£100 0 0	......
Mathematics	250 1 8	100 0 0	......
Greek	238 19 4	100 0 0	......
Logic and Metaphysics	305 14 8	......	......
Moral Philosophy	305 14 8	......	......
Natural Philosophy	271 4 6	100 0 0	£100 0 0
Rhetoric and English Literature	269 0 2	......	......
History	167 5 0	......	......
Practical Astronomy[1]	317 5 0	......	......
Agriculture	367 5 0	......	......
Music	437 5 0	200 0 0	100 0 0
Sanskrit	459 15 11	......	......
Engineering	400 0 0	......	28 0 0
Geology	404 10 2	......	37 8 8
Political Economy	467 5 0	......	50 0 0
Class Prizes in do.,	- - -	- - -	24 0 0
Education	382 6 2	......	......
Fine Art	441 3 4	......	40 8 2
Celtic Chair	549 19 8	......	......

FACULTY OF DIVINITY.

Divinity (present value)	£426 2 2	......	......
Hebrew	300 0 0	......	......
Church History	350 0 0	......	......
Biblical Criticism (present value)	630 0 0	......	......

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[1] The Professor is also Astronomer Royal.

FACULTY OF LAW.

	Salaries of Professors.	Salaries of Assistants.	Allowances for Class Expenses.
Public Law	£400 0 0	......	......
Civil Law	250 0 0	......	......
History	(See under Faculty of Arts.)		
Scots Law	100 0 0	......	......
Medical Jurisprudence	(See under Faculty of Medicine.)		
Conveyancing	105 0 0	......	......
Political Economy	(See under Faculty of Arts.)		

FACULTY OF MEDICINE.

	Salaries of Professors.	Salaries of Assistants.	Allowances for Class Expenses.
Botany[1]	£200 0 0	......	......
Institutes of Medicine	150 0 0	......	......
Practice of Physic	100 0 0	......	.....
Anatomy	......	£150 0 0	£50 0 0
Chemistry	200 0 0	200 0 0	100 0 0
Midwifery	100 0 0	......	......
Natural History	195 15 2	......	......
Materia Medica	100 0 0	25 0 0	50 0 0
Clinical Surgery	100 0 0	......	......
Medical Jurisprudence	100 0 0	25 0 0	35 0 0
Surgery	100 0 0	......	......
General Pathology	100 0 0	......	......

In addition to the permanent allowances for Assistants and Class Expenses entered above,—annual grants for the same purposes are made by the University Court from the General University Fund. The amount for 1891-92 was:—

For Assistants,	£1,469 0 0
For Class Expenses,	238 0 0
	£1,707 0 0

ADDITIONAL EXAMINERS FOR DEGREES.

		Salaries.
In Arts	Classical Literature	£120 0 0
	Mental Philosophy	120 0 0
	Mathematics	120 0 0
	Schoolmaster's Diploma	6 6 0
In Medicine—13 Examiners at £75		975 0 0
In Divinity—2 Examiners, each £26, 5s.		52 10 0
In Law—2 Examiners, a share of Fees up to £26, 5s. each		52 10 0
In Science—one Examiner in Civil Engineering		6 6 0
In Agriculture—4 Examiners at £6, 6s. each		25 4 0

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[1] This includes £100 formerly paid to the Regius Keeper of the Botanic Garden.

SUMMARY,
INCLUDING ANNUAL GRANTS BY UNIVERSITY COURT.

	Salaries.		
Principal	£1,000	0	0
Chairs in the Four Faculties	10,280	17	7
Assistants	2,469	0	0
Examiners in Arts, Medicine, Divinity and Law[1]	1,474	13	0
Allowances for Class Expenses	852	16	10
	£16,077	7	5

STATEMENT
SHOWING THE CAPITAL OF THE UNIVERSITY IN 1892, AND INCOME AND EXPENDITURE FOR THE YEAR 1891-92.

The University is maintained—1. By interest, &c., accruing from Capital Funds in charge of the University Court; 2. by Annual Payments made from Crown and Parliamentary Grants, and from an annuity payable by Act of Parliament out of the Revenues of the Harbour and Docks of Leith; 3. by Matriculation, Graduation, and other Fees, paid annually; and 4. by annual payments by public bodies or private persons, and from Bursary Funds, of which neither principal nor interest is in the hands of the Court. The income derived from the last of these sources is omitted from the present Statement, because the Court have not hitherto been able to obtain the necessary information for determining its amount, having no control over these funds or their application.

A.—CAPITAL IN CHARGE OF THE UNIVERSITY COURT, INCLUDING FLOATING BALANCES.

As at 31*st August* 1892.

I.—DESTINED FOR SPECIAL PURPOSES BY DEED, STATUTE, OR ORDINANCE.

1. For Salaries of Professors, viz. :—

(1.) Pulteney Foundation (Agricultural Chair)	£957	19	9
(2.) Thomson Foundation (4-5ths Nat. Hist. Chair)	991	18	8
(3.) Muir Foundation (Sanskrit Chair)	6,250	8	9
(4.) Reid Foundation (Music Chair)	12,000	0	0
(5.) Baxter Foundation (Engineering Chair)	5,037	17	6
(6.) Murchison Foundation (Geology Chair)	5,045	14	4
(7.) Watson-Gordon Foundation (Fine Art Chair)	11,103	16	0
(8.) Bell Foundation (Education Chair)	10,555	18	1
(9.) Celtic Chair,	14,214	18	9
Carry forward	£66,158	11	10

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[1] £540 of this sum is payable out of Government grant.

Brought forward				£66,158	11	10
(10.) Gifford Lectureship,				23,497	2	0
(11.) Baxter Fund for further endowment of Chairs in the Faculty of Arts, excepting Engineering and Sanskrit,				17,980	14	3
(12.) Steven Lectureship in Agriculture,				3,016	9	0
(13.) Chair or Lectureship on Forestry,				1,002	18	0
TOTAL				£111,655	15	1
2. For Class Expenses and Assistants :—						
(1.) Reid Found. (Music Chair),	£8,500	0	0			
(2.) Baxter Found. (Engineering Ch.)	665	16	5			
(3.) Murchison Found. (Geology Ch.)	1,011	15	9			
(4.) Thomson Foundation (1-5th Mineralogy),	247	17	2			
(5.) Watson-Gordon Foundation	1,110	0	0			
TOTAL				11,534	9	4
3. For Reid Commemoration Concert				8,000	0	0
4. For Bursaries, Scholarships, Fellowships and Prizes :—						
(1.) Aitken Scholarship	£3,078	17	0			
(2.) Ardvorlich Bursary	412	0	0			
(3.) Neil Arnott Prize	1,211	13	10			
(4.) Neil Arnott Scholarship	1,154	14	0			
(5.) Baxter Mathematical and Philosophical Scholarship	3,353	7	1			
(6.) Baxter Natural and Physical Science Scholarships	4,040	19	0			
(7.) Misses Baxter of Balgavies Scholarships	4,086	7	9			
(8.) John Edward Baxter Scholarships	7,919	6	7			
Do., For Examiners' Fees	359	16	8			
(9.) Bruce of Grangehill & Falkland's Scholarships and Bursaries	14,929	5	11			
(10.) Beaney Prize	1,000	0	0			
(11.) Cairns Bursary	474	10	0			
(12.) Cameron Prize	2,706	6	10			
(13.) Dr John Aitken Carlyle's Medical Bursaries	1,679	18	6			
(14.) Cousin Prize	463	12	8			
(15.) Bailie Cousin Bursary,	706	7	10			
(16.) Cobb Scholarship	993	12	8			
(17.) Crichton Bursaries,	29,258	6	9			
(18.) Drummond Scholarship	2,721	7	4			
Do., For Examiners' Fees	297	2	7			
Carry forward	£80,847	13	0	£131,190	4	5

Brought forward	£80,847	13	0	£131,190	4	5
(19.) Dickson Travelling Fund	3,123	1	11			
(20.) Dundas Bursaries	868	10	3			
(21.) Edinburgh University Endowment Association Arts Bursaries (revenue on hand)[1]	100	0	0			
(22.) Ettles Divinity Scholarships	3,290	18	11			
(23.) Ettles Medical Scholarship	1,000	0	0			
(24.) Ellis Prize	805	9	5			
(25.) Falconer Memorial Fellowship	2,944	4	7			
Do., For Examiners' Fees	119	13	4			
(26.) Fotheringham & Forrest Bursaries	1,226	0	0			
(27.) James Fairbairn Scholarship	1,074	1	9			
(28.) Freeland Barbour Fellowship	1,545	7	10			
(29.) Donald Fraser Bursary in the Physical Sciences,	1,566	1	6			
(30.) Glover Divinity Scholarship	1,147	10	6			
(31.) Gray Scholarships	2,274	19	1			
(32.) Guthrie Fellowship	2,655	3	2			
(33.) Grierson Bursaries	10,552	15	11			
(34.) Gunning Theological Scholarships[1]	119	2	3			
(35.) Goodsir Memorial Prize	978	2	2			
(36.) Hamilton Philo. Fellowship	2,645	10	8			
Do., For Examiners' Fees	149	4	5			
(37.) Harrison Bursary	960	8	8			
(38.) Hope Prize	2,456	18	1			
(39.) Robert Hunter Bursaries	1,006	4	7			
(40.) Jardine Bursary	936	8	2			
(41.) Jardine of Thorlieshope Bursaries	4,349	13	11			
(42.) Johnstone of Harthope Bursary	577	9	5			
(43.) Jeffrey Scholarships	4,582	7	0			
(44.) David Kidd Div. Scholarship	1,066	9	10			
(45.) Kelland Memorial Prize,	151	12	10			
(46.) Leith Harbour Annuity Fund	1,241	9	5			
(47.) Lang's Bequest	425	16	3			
(48.) Lockerby Bursary	1,013	6	6			
(49.) Lorimer Travelling Scholarship	1,234	10	3			
(50.) Leckie Mactier Fellowship	2,041	16	9			
(51.) Charles Maclaren Scholarship	2,836	14	7			
Do., For Examiners' Fees	208	14	4			
(52.) Maxton Scholarship	1,085	3	0			
(53.) Mackenzie Classical Scholarship	3,114	17	3			
Carry forward	£148,323	11	6	£131,190	4	5

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[1] Capital not in hands of University Court.

	Brought forward	£148,323	11	6	£131,190	4	5
(54.)	Macpherson Bursaries	2,859	11	2			
(55.)	Mackenzie Bursaries in Anatomy	1,010	2	2			
(56.)	Marshall Bursary	1,011	14	4			
(57.)	MacKinnon Bursaries	1,620	17	9			
(58.)	Mann Bursaries	2,031	2	9			
(59.)	Mackie Bursaries	1,824	13	7			
(60.)	Maclaurin Bursary	2,117	6	5			
(61.)	Milner Fothergill Prize	328	1	6			
(62.)	Muirhead Prize	498	16	6			
(63.)	Newton Bursaries	2,421	6	8			
(64.)	Prizes in Sanskrit, *Capital applicable*	45	13	8			
(65.)	Pitt Club Classical Scholarship	1,709	7	4			
(66.)	Pitt Club Theological Scholarship	3,326	10	9			
(67.)	Patrick Bursaries	3,494	10	3			
(68.)	Pattison Bursary	318	3	8			
(69.)	Rhind Scholarships	5,089	18	3			
(70.)	Renton Bursary in Arts	551	11	9			
(71.)	Renton Bursary in Divinity	550	6	3			
(72.)	Horsliehill Scott Bursaries	2,080	0	9			
(73.)	Shaw Philosophical Fellowship	4,364	15	2			
(74.)	Shortt Bursary	264	13	6			
(75.)	Steven of Ballahouston Scholarship	2,033	11	0			
(76.)	Syme Surgical Fellowship	3,013	19	3			
	Do., For Examiners' Fees	240	18	0			
(77.)	Scott and Dunbar Prize	305	13	3			
(78.)	Dobbie Smith Prize	167	0	0			
(79.)	Mackay Smith Scholarships	2,975	0	0			
	Do., For Examiners' Fees	120	2	7			
(80.)	Stark Scholarship	1,472	9	0			
(81.)	James Scott Scholarship	1,037	8	9			
(82.)	Tarsappie Bursary	163	14	8			
(83.)	Vans Dunlop Scholarships	66,647	11	4			
(84.)	Wightman Prize	397	1	4			
(85.)	Robert Wilson Memorial Prize	252	11	5			
(86.)	Webster Bursaries	4,134	11	0			
(87.)	John Welsh Bursaries	3,909	6	11			
(88.)	Whitelaw Bursaries	2,108	5	6			
(89.)	King William III. Bursaries	6	10	3			
	TOTAL				274,828	19	11
5.	Principal's Official Residence				4,694	0	0
	Carry forward				£410,713	4	4

Brought forward				£410,713	4	4
6. For Completion of present College Buildings:—						
Robert Cox's Bequest, with interest				21	3	3
7. Gilchrist Fund for purchase of apparatus				2,209	4	3
8. Eskbank Feu-Duties—Casualty Fund				215	1	9

II.—Capital, the Income of which is applicable for the General Purposes of the University.

(1.) General Reid's Trust Fund, Balance after setting aside sufficient Capital to provide Income for Special Purposes as above	£20,000	0	0			
(2.) General Sir Joseph Straton's Trust Fund	14,039	15	8			
(3.) Robert Cox's Bequest	1,794	14	8			
(4.) Alexander Gibson's Bequest	2,000	0	0			
(5.) John Fulton's Bequest	125	19	2			
				37,960	9	6

III.—Disposable Capital belonging to General University Fund, as at 31st August 1892.

1. Heritable Securities, &c.	£25,905	13	10			
2. Balances in Bank, &c.	2,541	1	2			
Total Disposable Capital				28,446	15	0
Total Capital in charge of University Court,				£479,565	18	1

B.—INCOME OF THE UNIVERSITY DESTINED BY DEED, STATUTE, OR ORDINANCE, 1891-92.

1. For Salaries of Principal and Professors:—						
(1.) From Interest, &c., of Funds in Charge of the University Court. See Statement of Capital, A. I. 1.				£2,824	13	5
(2.) From Leith Harbour Annuity				1,058	12	2
(3.) From Parliamentary Grant				5,427	18	3
(4.) From Deanery of the Chapel Royal				900	0	0
(5.) From Land Revenues of the Crown				250	0	0
(6.) Foundation for Conveyancing Chair, paid yearly by Society of Clerks to H.M. Signet				105	0	0
(7.) From Funds of George Watson's and Daniel Stewart's Hospitals				450	0	0
2. For Class Assistants and Class Expenses:—						
(1.) From Reid Fund for Music Chair. See Statement of Capital. A. I. 2.	£300	0	0			
Carry forward	£300	0	0	£11,016	3	10

Brought forward	£300	0	0	£11,016	3	10
(2.) From the Gen. Univ. Fund, for the Chairs of Chemistry, Nat. Philosophy, Anatomy, Materia Medica, and Medical Jurisprd.	735	0	0			
(3.) From Foundation for Chair of Engineering - - -	27	10	5			
(4.) From Murchison Foundation for Chair of Geology - -	36	9	10			
(5.) From Thomson Fund (Mineralogy), for Do. - -	8	14	5			
(6.) From Parliamentary Grant for Class Assistants in Faculty of Arts	400	0	0			
(7.) From Funds of Geo. Watson's and Daniel Stewart's Hospitals for Chair of Commercial Economy	50	0	0			
(8.) From Watson-Gordon Fund for Chair of Fine Art -	41	4	0			
				1,598	18	8
3. For Non-Professorial Examiners in Arts and Medicine, From Parliamentary Grant - - -				540	0	0
4. For Scholarships, Bursaries, and Prizes :—						
(1.) From Capital Funds in Charge of University Court. See Statement of Capital, A. I. 4	£9,604	16	6			
(2.) From Leith Harbour Annuity -	414	2	4			
(3.) From Funds of Geo. Watson's and Daniel Stewart's Hospitals for Chair of Commercial Economy	24	0	0			
				10,042	18	10
5. For Gifford Lectureship in Natural Theology -				801	3	0
6. For Steven Lectureship in Agriculture - -				102	7	6
7. For Reid Commemoration Concert, from Reid Fund, See A. I. 3 - - - - - -				300	0	0
8. For Lectures on Forestry from Special Government Grant - - - - - - -				100	0	0
9. For Lectures on Agriculture to Rural Schoolmasters from Special Government Grant - - - -				400	0	0
10. For Pensions to Ret. Profs. from Parliamentary Grant				2,890	15	6
11. For Lectureship on Forestry - - -				27	16	7
12. For purchase of Scientific Apparatus from Gilchrist Fund				80	8	10
13. For Management of Special Funds from interest of Floating Balances - - - - - -				99	17	3
14. For Casualty and Expenses on Eskbank Feu-duties				26	15	9
15. For completion of College Buildings, from Cox Fund				0	6	5
Total Destined Income - - -				£28,027	12	2

C.—TOTAL UNIVERSITY INCOME.

Destined Income as above - - -		- £28,027 12 2
General Fund Income, as below	£15,841 10 8	
Less Amount destined by Ordinance for Assistants and Class Expenses, entered above, C. 2 (2.) - -	735 0 0	15,106 10 8
Total University Income - - -		£43,134 2 10

D.—INCOME AND EXPENDITURE OF GENERAL UNIVERSITY FUND, 1891-92.

I.—INCOME.

1. Matriculation Fees - - - -		£3,323 0 0
2. Graduation Fees, viz.:—		
(1.) Arts - - -	£379 7 0	
(2.) Science - - -	352 13 6	
(3.) Medicine - - -	6,875 7 5	
(4.) Divinity - - -	58 5 0	
(5.) Law - - - -	93 8 0	
		7,759 0 11
3. Fees of Registration of Members of General Council		366 0 0
4. Fees of Admission to Library - - -		44 2 0
5. Interest of Invested Funds and Bank Accounts -		911 0 7
6. From Funds bequeathed to the University for General Purposes, viz.:—		
(1.) General Sir Joseph Straton's Bequest - - -	£488 18 8	
(2.) Robert Cox's Bequest -	69 19 10	
(3.) Alexander Gibson's Bequest	65 5 4	
(4.) John Fulton's Bequest, -	9 18 1	
		634 1 11
7. From Funds partly appropriated to Special Purposes, the Surplus Revenues of which fall to the General University Fund, viz.:—		
(1.) Leith Harbour Annuity Fund	£680 7 6	
(2.) General Reid's Trust Fund -	906 0 9	
		1,586 8 3
8. From Parliamentary Grant:—		
(1.) Year's grant for Buildings -	£500 0 0	
(2.) Do., Library -	575 0 0	
(3.) Unappropriated portion of quarter's grant - -	10 19 4	
		1,085 19 4
Carry forward - - - -		£15,709 13 0

Brought forward		£15,709 13 0
9. Miscellaneous Receipts :—		
(1.) For authority to publish Calendar	£100 0 0	
(2.) For use of Rooms for Meetings, &c.	22 10 0	
(3.) Sundries	9 7 8	
		131 17 8
Total General Fund Income		£15,841 10 8

II.—EXPENDITURE.

GENERAL ADMINISTRATION :—

1. *University Court—*		
(1.) Secretary's Salary		£390 0 0
(2.) Clerks' Salaries		236 19 3
(3.) Sundries		182 4 11
		£809 4 2
2. *Senatus Academicus—*		
(1.) Secretary's Salary	£243 15 0	
(2.) Clerk and Assistant Clerks' Salaries	304 17 7	
(3.) Dean of Faculty of Medicine's Do.	97 10 0	
(4.) Dean of Faculty of Arts' Do.	73 2 4	
(5.) Dean of Faculty of Divinity's Do.	29 5 0	
(6.) Dean of Faculty of Law's Do.	48 15 0	
(7.) Convener of Science Degrees Committee	29 5 0	
(8.) Sundries	268 10 5	
		1,095 0 4
3. *General University Council—*		
(1.) Secretary's Salary	£9 15 0	
(2.) Fees to Registrar and Assistants	144 18 0	
(3.) Meetings, Advertisements, &c.	151 4 0	
		305 17 0
4. *Editing Calendar—*		48 15 0
5. *Factors—*		
(1.) Salary	£475 11 11	
(2.) Sundries	56 1 0	
		531 12 11
Carry forward		£2,790 9 5

Brought forward				£2,790	9	5
6. *Law Agents*—						
(1.) General Business Account	£96	5	0			
(2.) Business Account to Agent of Colleges of Physicians and Surgeons in connection with opposition to Incorporation of Albert University	15	5	9			
				111	10	9
7. *Auditor*—				40	19	0
II. LIBRARY :—						
1. Librarians' Salaries	£1,000	0	0			
2. Books	1,022	13	4			
3. Bookbinding	215	19	3			
4. Printing, Stationery, &c.	103	6	4			
				2,341	18	11
III. MUSEUMS AND TEACHING APPLIANCES :—						
1. Anatomical Museum	£228	10	0			
2. Botanical Herbarium	100	0	0			
3. Natural Philosophy Museum	50	0	0			
4. Midwifery Do.	15	0	0			
5. Teaching Appliances	55	3	3			
				448	13	3
IV. BUILDINGS AND FURNISHINGS :—						
1. Maintenance, Repairs, and Renewals, &c.				1,756	0	0
V. LIGHTING, HEATING, AND CLEANING				1,350	7	1
VI. PUBLIC AND PAROCHIAL BURDENS AND FEU DUTY				435	15	11
VII. INSURANCE				204	8	11
VIII. SERVICE :—						
1. Janitor	£155	0	0			
2. Music Class Room Keeper	30	0	0			
3. Warder and Servitors and their Dress,	777	1	3			
				962	1	3
IX. CLASS ASSISTANTS AND CLASS EXPENSES :—						
1. Allocated by Commissioners' Ordinance	£735	0	0			
2. Allocated since by Senatus	1,707	0	0			
				2,442	0	0
Carry forward				£12,884	4	6

Brought forward				£12,884	4	6
X. EXAMINERS :—						
1. Divinity	£52	10	0			
2. Medicine	852	7	9			
3. Arts	226	9	0			
4. Law	52	10	0			
				1,183	16	9
XI. PRINTING AND ADVERTISEMENTS :—						
1. Printing	£259	15	5			
2. Advertisements	169	14	7			
				429	10	0
XII. MEDALS AND PRIZES :—						
1. Class Medals	£44	18	4			
2. Class Prizes	157	10	0			
				202	8	4
XIII. ORDINARY GRADUATION EXPENSES :—						
M.D. Stamp Duty deducted				166	19	1
XIV. INCIDENTAL GRANTS :—						
1. Athletic Club	£10	10	0			
2. University Musical Association	10	0	0			
3. University Golf Club	5	0	0			
				25	10	0
Total General Fund Expenditure				£14,892	8	8
Add Surplus of Revenue				949	2	0
Equal to Income				£15,841	10	8

The University Court.

ABSTRACT OF THE PROCEEDINGS OF THE UNIVERSITY COURT, FROM 1ST MAY 1892, TO 1ST MAY 1893.

MONDAY, 16TH MAY 1892.—It was reported that the following Draft Ordinances had been received from the Universities Commissioners:—(1) Draft Ordinance (Edinburgh, No. 3—Regulations for Degrees in Science in Engineering); and (2) Draft Ordinance (Edinburgh, No. 4—Regulations for Degrees in Science in Agriculture). It was intimated that the period during which objections or amendments to these Draft Ordinances may be lodged with the Commissioners expires on 14th July and 5th October respectively. The Draft Ordinances were remitted to the Draft Ordinances Committee for consideration and report.

The Minutes of last meeting were submitted and approved.

It was remitted to a Committee to prepare a scheme in connection with the Bucher Bequest to found a Scholarship or Scholarships in Music.

The Court resolved to appoint Mr William Harvey, LL.B., advocate, Additional Examiner in Physics for Graduation in Medicine in the University, for the remainder of his term of office as Additional Examiner in Mathematics, and in Physics for the 2d B.Sc. Examination in Public Health.

The Court had under consideration copy Draft Minute of the Acting Committee of the Association for the Better Endowment of the University of Edinburgh, under which it is proposed to provide for two Arts Bursaries of £20 a year each for three years, or one such Bursary of £40 a year, in each of sessions 1892-93 and 1893-94. The Court resolved to accept the Bursaries on the terms contained in the Draft Minute.

On the recommendations of the Works and Finance Committees, the Court resolved to expend a sum of about £384 on the heating, re-seating, &c., of the Music Class-Room, in accordance with plans prepared by the Clerk of Works.

The Finance Committee reported that accounts, awards by Senatus of Bursaries, Scholarships, &c., had been passed for payment.

The Works Committee submitted their report on Repairs and Jobbing Work for the past half-year. The Committee also submitted their report on the new work which they proposed to carry out. The Court approved of the report. There were laid before the Court copies of Reports by Committees of the General Council of the University.

The Court approved generally of a Scheme prepared by the Science Degrees Committee, in accordance with a remit from the Senatus, for the Vacation classes (to begin on 1st August next) in Agriculture and Chemistry, provided for by grant from the Board of Agriculture for the Education of Schoolmasters. The Court agreed to communicate with the Secretary of the Science and Art Department, requesting that a special examination in Agriculture be held by the Department towards the end of the Vacation course, on the understanding that candidates who pass such examination shall be certified as qualified to teach Agriculture.

It was resolved to request the Senatus to frame regulations subject to which the Lockerby Bursary in Divinity shall be awarded and held.

MONDAY, 13TH JUNE 1892.—A letter from the Universities Commissioners was submitted, desiring the Court, after consultation with the Senatus, to report as to the following points among others :—The advisability of combining the Bursary and Preliminary Examinations ; the principles on which first year's Bursaries in Arts ought to be awarded ; the extent to which Bursaries now appropriated to the Faculty of Arts might be awarded to students proceeding to a Degree in Science ; the amalgamation of Bursaries under a certain value, and the removal of certain restrictions from Bursaries.

The deed of foundation of the Lorimer Travelling Scholarship in Law was submitted, and the foundation formally accepted.

The Minute of the Acting Committee of the Association for the Better Endowment of the University of Edinburgh, providing for two Arts Bursaries of £20 a year each for three years, or one such Bursary of £40 a year, in each of sessions 1892-93 and 1893-94, was submitted, and the endowment formally accepted.

It was resolved to invite the other University Courts to assist in creating a Joint Examining Board, as provided for by Ordinance No. 13, as early in July as possible, should the Ordinances concerned become law on or before 1st July next.

It was agreed to continue the recognition of Professor Windle, Queen's College, Birmingham, as a Teacher of Anatomy on change of teaching rooms from the Queen's College to new buildings, Mason College, Birmingham.

Pending the fixing of the fees to be paid for Graduation in Arts, the Court resolved, on the recommendation of the Finance Committee, that for next session candidates for Graduation in Arts shall pay a fee of 10s. 6d. for each subject to be examined on.

It was agreed to carry out the recommendations of the Works Committee for the improvement of the fire extinguishing appliances, at an estimated cost of £110, 15s.

The amendments suggested by the Draft Ordinances Committee on the Commissioners' Draft Ordinance (Edinburgh No. 3—Regulations for Graduation in Science in Engineering) were considered, and were directed to be forwarded—in so far as approved of—to the Universities Commissioners.

The Court approved for next session, of a recommendation of the Senatus that the Professor of History shall give a full Winter Course on British History, and that the fee shall be £3, 3s.

The Court considered a recommendation of the Senatus, together with a relative Minute of the Faculty of Arts, in regard to the teaching of the junior classes in Latin, Greek, and Mathematics, to the effect that as these classes are not in future to qualify for graduation, the Professors should be relieved from teaching them, on condition that they should supervise the teaching of these classes, and be generally responsible for the arrangements, and that in lieu of the work from which they would thus be relieved, they should be required to give an equivalent amount of higher teaching in winter or in summer courses of lectures, or in tutorial work with advanced students. The Court approved.

The Court appointed a committee to sanction or amend, subject to the approval of the Court, schemes to be submitted by the Senatus with reference to courses qualifying for Graduation in Arts to be delivered next session. On a recommendation of the Senatus, the Court granted an application by Dr R. F. C. Leith for recognition as a Teacher of Practical Pathology in Edinburgh, whose courses of instruction shall qualify for Graduation in Medicine in the University.

MONDAY, 18TH JULY 1892.—It was intimated that copies of Orders of Her Majesty in Council had been received approving of the following Ordinances of the Universities Commissioners, viz. :—Ordinance No. 11 (General No. 6—Regulations for Degrees in Arts); Ordinance No. 12 (General No. 7—Regulations for Degrees in Science); Ordinance No. 13 (General No. 8—Regulations as to Examinations); Ordinance No. 17 (General No. 10—Regulations as to Assistants and Lecturers); Ordinance No. 18 (General No. 9—Regulations for the Graduation of Women and for their Instruction in the Universities).

Professors Armstrong and Wallace having been heard in connection with proposed amendments on the Commissioners' Draft Ordinances on Engineering and Agriculture, these Draft Ordinances were remitted to the Draft Ordinances Committee.

The Court having learned from Mr Christison with great regret that the state of his health does not hold out the prospect of his being able to resume the duties of the Secretaryship, accepted his resignation as from 30th September next, and desired to record its high sense of the uniform courtesy, ability, and zeal with which he had discharged the duties of the office since his appointment in 1865.

Dr Maurice Paterson, whose term of office as Additional Examiner for the Schoolmaster's Diploma expires 15th November next, was reappointed for the period of three years from that date.

The Court appointed William Mitchell, M.A., D.Sc., Aberdeen, Additional Examiner in Mental Philosophy in the University for three years from 1st October next.

On the recommendation of the Professor of Mathematics, the Court resolved to appoint Mr Charles Tweedie as University Assistant in Mathematics.

The following suggestions, among others, by the Senatus regarding the Preliminary and Bursary Examinations to be held in October next were approved :—That the Preliminary and Bursary Examinations be combined, the time-table of hours and subjects to be intimated in the supplement to the UNIVERSITY CALENDAR about to be published ; that candidates who have passed on the higher standard in Latin, Greek, or Mathematics be held *ipso facto* to have passed on the lower standard ; that a candidate who has taken the higher paper in Latin, Greek, or Mathematics, and who has failed to pass on the higher standard, may be adjudged by the Examiners to have passed on the lower standard, provided he reaches a certain minimum, and provided he has not already presented himself for the lower paper in the subject in question; that the higher papers in Latin, Greek, and Mathematics alone be taken into account in awarding Bursaries.

The Court appointed Mr George Gregory Smith, M.A., to be Additional Examiner in the Department of English for the Preliminary Examination for next Session.

On the recommendation of the Senatus, the Court resolved that all the examinations indicated in the CALENDAR as equivalents *pro tanto* for the Medical Preliminary Examination, for the three years' curriculum examination, and for the Entrance Examination in Mathematics, be held for the present year to confer a corresponding exemption from the new Preliminary Examinations in Arts, Science, and Medicine.

The Court adjourned, to meet on Wednesday the 20th inst., at four.

WEDNESDAY, 20TH JULY 1892.—An adjourned meeting of the University Court was held to-day. On the recommendation of the Committee appointed by the Court to sanction or amend arrangements to be submitted by the Senatus with reference to Courses that shall qualify for Graduation in Arts next Session, the Court sanctioned the following Courses :—(1) The institution of an Intermediate Honours Class in Pure Mathematics, to meet at least fifty times in the Winter Session, the Class to be taught by the Professor of Mathematics ; (2) the institution of an Intermediate Honours Class in Natural Philosophy, to meet at least fifty times in the Winter Session, the Class to be taught by the Lecturer on Applied Mathematics ; (3) that the fee for every full Honours Course of at least fifty Lectures, which is taken as a qualifying Course for Graduation in Arts, shall be £3, 3s. The Court also approved of the recommendation of the Committee regarding the arrangements as to the Lectures and Practical work in the Science Courses in Astronomy, Chemistry, Zoology, and Geology which qualify for Graduation in Arts. With reference to the Courses in Zoology and Botany, the Court agreed that it should be in the option of the Professor to give the fifty hours of Practical work during twenty-five Class meetings of two hours each on separate days. The Court also approved of the institution of a Celtic Class (non-qualifying) for the instruction of junior students; of the institution of a non-qualifying Course by the Professor of Public Law on the Philosophy of Law in connection with the Department of Mental Philosophy; and of a full Course by the Professor of Fine Art on Archæology, &c., to qualify for Graduation in Arts. The Court further agreed, on the recommendation of the Senatus, that the Summer Course of the Professor of History on Constitutional Law and History, consisting of at least forty-four Class meetings, shall be recognised as a half Course qualifying for the Ordinary Degree in Arts; that the Winter Course of the Professor of Roman Law, consisting of at least eighty-eight Class meetings, shall be recognised as a full Course qualifying for the Ordinary M.A. Degree; that a section of the same Course, consisting of at least forty-four Class meetings, shall be recognised as a half Course for the same purpose, and that a Course on Public International Law, consisting of at least forty-five Class meetings, shall be recognised as a half Course qualifying for the M.A. Degree. The sanction of the Court was given as above, on condition that where full Courses of less than one hundred Class meetings and half Courses of less than fifty Class meetings are instituted, the teaching shall cover at least twenty and ten teaching weeks respectively. Particulars as to the proportion of Systematic and Practical work, the number of Class meetings, the hours of attendance, and the Class fees will be given in the supplement to the CALENDAR, which is about to be published.

The Court resolved that Candidates who take the Preliminary Examination as a Bursary Examination exclusively shall be exempt from the fee of half a guinea which is payable by all Candidates who take any part of the Preliminary Examination in order to enter on a Course for Graduation.

It was agreed, on the recommendation of the Senatus, to arrange, if possible, for the extension over a period of five months of the Course of Practical Instruction for the Schoolmaster's Diploma, and for including in it all the Practical work of a Training College.

It was agreed, also on the recommendation of the Senatus, that women who have passed Examinations conducted by the University Examiners in Arts, in two or more subjects required for the University Certificate in Arts for women, shall be held qualified to become Candidates for the Certificate of Literate in Arts (L.A.) of the University of Edinburgh, provided that they complete within the University the additional Classes required for the Certificate and pass the prescribed examinations.

It was resolved that the next ordinary meeting of the Court shall be held on the 26th instead of on the 17th of October, at 4 o'clock.

WEDNESDAY, 26TH OCTOBER 1892.—It was reported that copy of an Order of Her Majesty in Council had been received, continuing the powers of the Universities Commissioners till 1st January 1894.

There were submitted copies of Orders of Her Majesty in Council approving of the following Ordinances:—No. 9 (General No. 4—General Council); No. 10 (General No. 5—Assessors of General Council); No. 16 (Edinburgh No. 1—Regulations for Degrees in Medicine); and No. 19 (St Andrews, Aberdeen, and Edinburgh, No. 2—Libraries).

There was also submitted a Draft Ordinance of the Universities Commission regarding the tenure of the Chair of Commercial and Political Economy in the University. The Draft Ordinance was remitted to the Draft Ordinances Committee.

The minutes of meetings of 18th and 20th July last were submitted and approved.

Letters from the Universities Commissioners were read, intimating that they will be prepared to provide the additional sum desired of them by the Court for carrying out the provisions of Ordinance No. 11 during session 1892-93 (under deduction of the sum applicable to the expenses of the Joint Board)—viz., £974, 6s.; and that they will also be prepared to provide for the necessary expenses of the Preliminary Examination, which will fall to be held in the course of the current academical year, after the institution of the Joint Board.

On the recommendation of a committee, the Court resolved to appoint Mr Charles D. Campbell as Additional Examiner in Modern Languages on the Joint Board of Examiners.

On the recommendation of the Senatus, the Court appointed Dr C. G. Knott as Lecturer on Applied Mathematics for the current session.

It was remitted to a committee to select Additional Examiners for Graduation for the current session, in Sanskrit, Celtic, Astronomy, Archæology, History, and Geology.

It was reported that the Court's request that the Science and Art Department should hold a special examination in Agriculture during the late vacation had been granted, and that the examination had been held in the University on 25th August last.

It was agreed to appoint Professor Taylor to the office of Secretary of the University Court, in room of John Christison, Esquire, W.S., resigned.

The Court appointed Mr T. G. Dickson, C.A., to audit the Financial Report for 1891-92 to the Secretary for Scotland.

The Court re-appointed Sheriff Mackay; James Colston, Esq.; Sir Thomas Clark, Bart.; Mr J. Balfour Paul, advocate, Lyon King; Mr Ralph Dundas, C.S.; Mr J. T. Brown; and Mr J. A. Clyde, advocate, as their quota of members of the Library Committee; and Dr Heron Watson, Dr John Duncan, and the Lord Provost as their quota of members of the Museums Committee, for the current academical year.

On the recommendation of the respective Professors, the University Assistants in the several Departments were appointed for the year from 1st inst.

The amendments proposed by the Trustees for the Bucher Bequest on the scheme of administration were approved.

An extract minute of Senatus was submitted, intimating the resignation of the Rev. Professor Taylor, D.D., as one of their Assessors in the University Court.

On the recommendation of the Senatus the Court granted recognition for purposes of graduation in Medicine in the University to the following applicants :—(1) J. S. M'Laren, M.B., C.M. (Surgery) ; (2) Claude F. Henry (Practical Materia Medica) ; (3) Dr P. H. MacLaren, in conjunction with Dr C. W. Macgillivray (Clinical Surgery) ; (4) Dr James Hodsdon, for continuation of recognition in Surgery on change of teaching rooms ; (5) Professor Andrew Gray (Physics) ; (6) Mr Alexander Johnstone (Botany) ; (7) Dr R. F. C. Leith (Pathology), and for continuance of recognition in Practical Pathology on change of teaching rooms.

On the recommendation of the Senatus and of the Faculty of Divinity it was agreed to appoint the Rev. John William Murray to conduct the classes of Hebrew, &c., until such time as the Professor-elect shall be prepared to enter on the duties of the Chair.

On the recommendation of the Senatus that the course on Forestry, extending to one hundred lectures, should be divided into two distinct parts —the first Course comprising fifty lectures to be given during the winter session, and the second Course comprising a like number of lectures to be given during the summer session,—the Court agreed that the fee for each Course taken separately should be £2, 2s., and for both taken together £3, 3s.

The Court also agreed that the fee for the Course of lectures on Economics for students in Agriculture should be £2, 2s.

A report of the Business and Law Committee,—to whom the matter had been remitted,—recommending the omission of Botany from future Courses in Agriculture for schoolmasters, was submitted and approved.

The reports of the Finance Committee on awards of scholarships, &c., fees to Examiners, and accounts, were submitted and approved.

The Works Committee reported that reading-room accommodation, &c., had been provided for women students in Arts.

On the recommendation of the Committee, the Court approved of the installation of electric light in the Chemistry practical class-room.

The Court directed that the amendments by the Draft Ordinances Committee on the Commissioners' Draft Ordinance (Edinburgh No. 4 —Regulations for Degrees in Science in Agriculture) should be forwarded to the Universities Commissioners ; and that the Committee's amendments on the Commissioners' Draft Ordinance (Edinburgh No. 3 —Regulations for Degrees in Science in Engineering), in so far as approved of by the Court, should be forwarded to the Commissioners.

MONDAY, 14TH NOVEMBER 1892.—The minutes of meeting of 26th ult. were submitted and approved.

The term of office of one of the additional examiners in Law expiring on 31st December next, the Court agreed to advertise the vacancy, and to intimate that an appointment will be made with special reference to the qualification of candidates in Scots Law, Conveyancing, and Medical Jurisprudence.

The term of office of the Additional Examiners in the Department of Agriculture expiring on 31st December next, the Court agreed to advertise for one examiner in Veterinary Hygiene and one in Agricultural Chemistry.

The Court also agreed to advertise for additional examiners in (1) Anatomy; (2) Chemistry and Laboratory work for First B.Sc. Examination in Public Health; (3) Midwifery; (4) Practice of Physic; and (5) Botany.

The Class Returns of the University Professors and Recognised Medical Lecturers for 1891-92 were remitted to a Committee for consideration and report.

The Court resolved that the fees for the Professional Examinations for the Degrees of M.B. and Ch.B. under the new Ordinance in Medicine, should be apportioned as follows:—The fee for the first division of the examination to be £6, 6s. Candidates who avail themselves of the option to appear in any two subjects to pay £3, 3s. for examination in these subjects and £3, 3s. for the other two subjects of examination. The fee for the second division of the examination to be £6, 6s. Candidates who avail themselves of the option to defer the examination in Materia Medica and Therapeutics to pay £4, 4s. for the first stage of the examination, and £2, 2s. for the second stage. The fee for the third division of the examination to be £4, 4s. The fee for the final division of the examination to be £6, 6s. Candidates who fail to pass either in the whole or in one or more of the subjects in any division of the examination to pay £1, 1s. for each subject in which they have failed before they can be re-admitted to examination in that subject. Candidates who, under the proviso in Section XI. of the Medical Ordinance, are exempted from the first division of the examination are required, after passing the final division, to pay a fee of £6, 6s. before they can be admitted to the degrees of Bachelor of Medicine and Bachelor of Surgery.

Various accounts, &c., were reported as having been passed by the Finance Committee for payment.

Letters from the Glasgow and Aberdeen University Courts were submitted, giving the names of their representatives on the Joint Board of Examiners. The Joint Board now created is constituted as follows:—Representing St Andrews— Professor Henry Jones, St Andrews (English); Dr Hugh Campbell, Falkirk (Classics); and Mr George Lowson, M.A., B.Sc., Stirling (Mathematics and Dynamics). Representing Glasgow—Professor G. G. Ramsay, the University (Modern Languages); J. M'Cunn, Esq., University College, Liverpool (English); and A. M. Bell, Esq., Oxford (Classics). Representing Aberdeen—Principal Sir William D. Geddes (Modern Languages), the Rev. Professor George Pirie (Mathematics and Dynamics), and the Rev. Dr

Davidson, Old Meldrum (English). Representing Edinburgh—Professor S. H. Butcher (Classics); William Harvey, LL.B., Advocate (Mathematics and Dynamics); and Mr Chas. D. Campbell (Modern Languages).

Copies of reports by committees of the General Council of the University were submitted.

MONDAY, 12TH DECEMBER 1892.—Professor Calderwood took his seat as a member of the Court on his appointment by the Senatus as an Assessor, in succession to Professor Taylor, resigned.

Intimation was made that the Right Honourable the Lord Justice Clerk's term of office as a Curator of Patronage expires on 26th February next.

The members of the three Standing Committees (Business and Law, Finance, and Works) were appointed for the year to 30th September next. Professor Calderwood was added to the Business and Law Committee, and Lord Stormonth Darling to the Finance Committee. Professor Calderwood was appointed a member of the Draft Ordinances Committee.

The Commissioners' Draft Ordinance (Edinburgh No. 5—Tenure of the Chair of Commercial and Political Economy), as amended by the Draft Ordinances Committee, was approved.

On the recommendation of a committee the Court appointed Mr James Mackinnon, M.A., Ph.D., to be Additional Examiner in History, and Mr W. M. Conway, late Roscoe Professor of Fine Art in University College, Liverpool, to be Additional Examiner in Archæology and Fine Art, for Graduation in Arts, for the year from 1st January next.

On consideration of a Minute of Senatus of date 26th ult., the Court appointed Mr F. R. Jamieson, M.A.; Mr Alexander Douglas Thomson, M.A.; and Mr Charles Tweedie, M.A., presently University Assistants in Latin, Greek, and Mathematics respectively, to be Lecturers in these subjects for the academical year 1892-93, who shall conduct classes next summer session qualifying for Graduation in Arts.

On consideration of a Minute of Senatus of date 26th ult., the Court appointed Dr Maurice Paterson to be Additional Examiner in the Theory, History, and Art of Education for Graduation in Arts, for the period of four years from 1st January next.

On the recommendation of the Senatus, the Court authorised the Professor of Pathology to charge a fee of £3, 3s. for the Laboratory Class of Practical Pathological Bacteriology for senior students and graduates. The Court also resolved that such students should be allowed to attend this class on payment of a modified matriculation fee of five shillings.

Intimation was made of the induction of the Rev. John Dobie, M.A., B.D., as Professor of Hebrew and Oriental Languages.

On the recommendation of the Senatus, the Court approved of a scheme for advanced courses in Agriculture for schoolmasters, supplementary to the vacation courses already instituted. The subjects to be taught are Agriculture, Agricultural Chemistry, Geology, and Botany; ten lectures on each subject to be given along with practical instruction, and the courses to be conducted in August or September.

Various accounts, awards of bursaries, &c., were reported as having been passed for payment.

The Finance Committee's Report on the University Accounts for the financial year from 1st September 1891 to 31st August 1892, with estimate of revenue and expenditure for 1892-93, was considered, adjusted, and approved.

On the recommendation of the Professor of Hebrew and Oriental Languages, the Court appointed the Rev. John William Murray to be University Assistant in these subjects for the academical year 1892-93.

MONDAY, 16TH JANUARY 1893.—Copies of the following draft ordinances of the Universities Commissioners were submitted, viz.:—Draft Ordinance (Glasgow, Aberdeen, and Edinburgh, No. 1—Regulations as to application of Parliamentary Grants, as to Salaries, and for the Institution of a Fee Fund, and for other purposes); Draft Ordinance (General No. 11—Composition of the Faculties and Institution of Faculties of Science); Draft Ordinance (General No. 12—Pensions to Principals and Professors); Draft Ordinance (Edinburgh No. 6—Foundation of Professorship of History). It was intimated that the time for lodging objections or amendments to these Draft Ordinances would expire on 19th March next. Copies were also submitted of a Memorandum by the Commissioners regarding the first of these Draft Ordinances, and to Draft Ordinance (St Andrews No. 5—Regulations as to application of Parliamentary Grants). The first and third of the above Draft Ordinances, along with the relative Memorandum, were remitted to the Draft Ordinances Committee in conjunction with the Finance Committee; the second and fourth to the Draft Ordinances Committee, for consideration and report.

The minutes of last meeting were submitted and approved.

Lord Stormonth Darling was appointed a member of the Electing Body of the Steven Lectureship in Agriculture, in room of the late Mr T. G. Murray, W.S.

The Lord Justice-Clerk was reappointed a Curator of Patronage for three years, from 26th February next.

Intimation was made that Mr J. P. Coldstream's second period of office as Lecturer on Civil and Criminal Court Procedure expires 31st March next.

Mr Robert L. Orr, M.A., LL.B., Advocate, was appointed to be an Additional Examiner in Law.

Appointments to the vacant examinerships in Medicine were made as follows:—(1) Anatomy—Professor D. J. Cunningham, M.D., Trinity College, Dublin; (2) Midwifery—A. H. F. Barbour, M.D., Edinburgh; (3) Practice of Medicine—Alexander James, M.D., Edinburgh;

each of these appointments being for four years from 1st inst. With regard to the vacancy advertised in Chemistry and Laboratory work for the 1st B.Sc. Examination in Public Health, the Court resolved to advertise for two additional examiners, one for Chemistry and the other for Laboratory Work for the 1st B.Sc. Examination in Public Health. The appointment of an additional examiner in Botany was delayed. The additional examiners in the other Departments of Medicine were appointed for the remainder of the period of five years from the date of their appointment on 1st January 1890 and 1892 respectively.

In the Department of Agriculture, Professor William Somerville, B.Sc., D.Œcon., Newcastle-on-Tyne, was appointed additional examiner in Agriculture for four years, from 1st inst.; Mr W. Owen Williams, F.R.C.V.S., Edinburgh, additional examiner in Veterinary Hygiene for one year from 1st inst.; and Mr John Hunter, Edinburgh, additional examiner in Chemistry, as applied to Agriculture, for four years from 1st inst.

The appointment of an additional examiner in Political Economy for Graduation in Arts, and of one in Geology for the B.Sc. degree, was remitted to a committee. Professor D. J. Cunningham, M.D., was appointed additional examiner in Human Anatomy, including Anthropology; and Professor William Stirling, M.D, D.Sc., in Physiology, for the B.Sc. degree.

On the recommendation of the Senatus, the application of Mr J. W. Carr, M.A., University College, Nottingham, for the recognition of his Course of Instruction on Botany was granted.

The Court approved of a recommendation of the Senatus that the Certificate of Literate in Arts should be granted in future only to students who have passed the Preliminary Examination and subsequently attended for two winter sessions, or one winter and two summer sessions, the usual Course of Instruction in the subjects in which they wish to qualify; that the number of subjects to be passed shall be four, and the standard of examination shall be the graduation standard; that of the subjects selected two shall be from two of the groups mentioned in Section VII., sub-section (2) of the Arts Ordinance, and the others may be any two named in the Arts Ordinance, with the addition of Music and Agriculture—Agriculture to be afterwards defined.

Letters were submitted from the Education Committee of the Church of Scotland and of the Free Church, granting permission to candidates studying for the Schoolmaster's Diploma to go through a complete Practical Course in the training colleges on payment of such fee as may be agreed upon.

It was intimated that the Glasgow University Court had appointed Dr George Merry, Rector of the High School, Dundee, as their representative on the Joint Board of Examiners, in English, in room of Professor J. M'Cunn, resigned.

Copies of a letter from the Professor of History to the Universities Commissioners with regard to the Chair of History having been submitted, were remitted to the Draft Ordinances Committee.

The Financial Report for 1891-92 to the Secretary for Scotland, under Section 30 of the Universities (Scotland) Act 1889, was submitted and approved.

Fees to the additional examiners who had taken part in special examinations in October last were passed for payment.

Various accounts, awards of bursaries, &c., were reported as having been passed by the Finance Committee for payment.

The expenses incurred in connection with the Preliminary Examinations in October last were referred to the Finance Committee.

MONDAY, 13TH FEBRUARY 1893.—The minutes of last meeting were submitted and approved.

A Draft Ordinance of the Universities Commission (Edinburgh No. 7—Regulations for Degrees in Music) was referred to the Draft Ordinances Committee.

Letters from the Universities Commission were submitted, intimating that the following Ordinances had been forwarded by them to the Secretary for Scotland, with the request that they be laid before both Houses of Parliament, in terms of Section 20 of the Universities (Scotland) Act, 1889, viz.: Ordinance No. 26 (Edinburgh No. 2—Institution of the Faculty of Music, and regulations for the Reid Professorship); Ordinance No. 21 (Edinburgh No. 3—Regulations for Degrees in Science in Engineering); Ordinance No. 22 (Edinburgh No. 4—Regulations for Degrees in Science in Agriculture); Ordinance No. 24 (Edinburgh No. 5—Tenure of the Chair of Commercial and Political Economy).

A letter from the Universities Commission with reference to Draft Ordinance (Glasgow, Aberdeen, and Edinburgh No. 1—Parliamentary Grants, &c.), was remitted to the Draft Ordinances Committee.

Additional examiners were appointed as follows:—(1) Botany—J. Bretland Farmer, M.A., London; (2) Chemistry—John Gibson, Ph.D., Edinburgh; (3) Laboratory Work for the First Examination for the Degree of B.Sc. in Public Health—James A. Cameron, M.D., B.Sc., Nairn; the period of office in each of these cases being four years from 1st January last.

Mr A. H. Briggs Constable, LL.B., advocate, Edinburgh, was appointed Additional Examiner in Political Economy; and Mr Henry Mowbray Cadell, B.Sc., F.R.S.E., Additional Examiner in Geology; both appointments being for the current year.

The Court having considered that, while arrangements have been made for the admission of women to the Arts Classes, no provision has been made for their admission to graduation, resolved to admit women to graduation in Arts.

It was reported by the Senatus that arrangements had been made by the Faculties of Arts, Law, and Medicine for notifying to each candidate the results of the Graduation or Professional Examination for which he has appeared.

On the recommendation of the Senatus, the Court agreed that one of the winter classes taught by the University Assistant in Mathematics, corresponding to the Senior Class, shall count as a half Course for graduation, and that the other two shall be tutorial classes merely.

On the recommendation of the Senatus, the Court appointed Messrs R. P. Hardie, M.A.; Charles M. Douglas, M.A., D.Sc.; William Peddie, D.Sc.; and G. Gregory Smith, M.A., University Assistants, to be Lecturers in Logic, &c., Moral Philosophy, Natural Philosophy, and English respectively, for the current year.

The Court agreed that the fee for the Class of Anthropology shall be £2, 2s., and that students who take both the Class of Anthropology and the summer course of Practical Anatomy shall pay a fee of £3, 3s., instead of £4, 4s.

On the recommendation of the Senatus, the Court agreed that the senior classes to be conducted during the ensuing summer session by Messrs F. R. Jamieson, M.A., and A. D. Thomson, M.A., Lecturers in Latin and Greek respectively, shall qualify as half Courses for the Ordinary Degree in Arts, and that the fee for each of these half Courses shall be £2, 2s.

Various accounts, awards of bursaries, &c., were reported as having been passed by the Finance Committee for payment.

MONDAY, 20TH MARCH 1893.—The minutes of last meeting were submitted and approved.

It was intimated that the meeting had been postponed from the 13th to the 20th of March.

Intimation had been received from the Universities Commission that the following Ordinances had been laid before Parliament:—No. 20 (Edinburgh No. 2—Institution of the Faculty of Music, and Regulations for the Reid Professorship); No. 21 (Edinburgh No. 3—Regulations for Degrees in Science in Engineering); No. 22 (Edinburgh No. 4—Regulations for Degrees in Science in Agriculture); No. 24 (Edinburgh No. 5—Tenure of the Chair of Commercial and Political Economy).

It was reported that copies of Draft Ordinance (Edinburgh No. 8—Regulations for Degrees in Science in Public Health) had been received, and that the time for lodging objections or amendments expires 4th June next. The Draft Ordinance was remitted to the Draft Ordinances Committee.

The Committee on the Class Returns for 1891-92 gave in their report.

The Court agreed to a recommendation of the Senatus in favour of the admission of women to the examinations for degrees in science, provided that arrangements be made for their instruction in the subjects required.

The Court approved of a recommendation of the Senatus that the entrance fee of 5s. in lieu of matriculation should in future be made applicable to the music classes, except in the case of students taking these classes for graduation.

Dr Argyll Robertson was reappointed Lecturer on Diseases of the Eye.

The Court approved of the arrangements recommended by the Senatus for examining in Operative Surgery during the Final Examination for Degrees in Medicine and Surgery.

On the recommendation of the Senatus, Dr Dawson F. D. Turner was recognised as a teacher of Physics in Edinburgh, whose course of instruction shall qualify for graduation in Medicine in the University.

The Court approved of the following recommendations of the Senatus in connection with Music:—(1.) That the Course in Harmony, Melody, and Rhythm (Theory and Practice) be forty lectures of one hour each on Tuesdays and Fridays, instead of one hour with the option of a second as at present; the fee to be £2, 2s. (2.) That there should be an Advanced Course on Harmony, Melody, Rhythm, and Counterpoint (Theory and Practice) of forty lectures, on Tuesdays and Fridays; fee to be £2, 2s. (3.) That the Professor of Music should give a Course of six historical musical concerts during next winter session, in accordance with the provisions of Ordinance (Edinburgh No. 2—Faculty of Music), Students of Music to be admitted free; the fee for the Course to others being half-a-guinea.

On the recommendation of the Business and Law Committee, suggestions drawn up by the Senatus, and recommended by them to the Court, regarding the arrangements, financial and other, of the Preliminary, Graduation, Honours, and Scholarship Examinations, were approved. The recommendations included the appointment of Professor Eggeling as Examiner in Modern Languages for the Preliminary Examinations.

The same Committee reported that they had examined the Librarian's Report on the Library for the year 1891-92; and also that they had examined the Report on Statistics for the same year, required by section 30 of the Act of 1889, and had found the same to be in order.

The amendments suggested by the Finance and Draft Ordinances Committees on Draft Ordinances (Glasgow, Aberdeen, and Edinburgh No. 1—Regulations as to Application of Parliamentary Grants, as to Salaries, and for the Institution of a Fee Fund, &c.), and (General No. 12—Pensions to Principals and Professors) were approved. The amendments suggested by the Draft Ordinances Committee on Draft Ordinances (General No. 11—Composition of the Faculties, &c.), and (Edinburgh No. 6—Foundation of Professorship of History) were approved. The Committee suggested no amendments on Draft Ordinance (Edinburgh No. 7—Regulations for Degrees in Music).

It was intimated that an extension of time to 1st April for lodging objections, &c., to the Draft Ordinances on Finance, Professorship of History, and Composition of the Faculties, &c., had been granted by the Commissioners.

The Finance Committee reported that various accounts had been passed for payment.

It was intimated on behalf of the Electing Body of the Steven Lectureship in Agriculture that Dr William Fream had been reappointed Lecturer for three years as from 30th November next.

Mr J. P. Coldstream, W.S., was reappointed Lecturer on Civil and Criminal Court Procedure for a term of five years from 31st curt.

The Court appointed Dr C. G. Knott to be examiner in Physics for the first Professional Examination in Medicine in room of Professor Tait.

The Court resolved to meet on 10th instead of on the 17th of April.

MONDAY, 10TH APRIL 1893.—It was reported that a grant had been received from the Board of Agriculture of £350 in respect of the Schoolmasters' Class in Agriculture held in August last; and of £100 in respect of Instruction in Forestry.

On the recommendation of the Senatus the following new courses were approved:—(1) Half courses qualifying for Honours, by the Lecturers in Logic and in Moral Philosophy, on Ancient Greek Philosophy, and on Psychology, respectively, during next summer session, at a fee in each case of £2, 2s.; (2) a Junior Syriac Class, to be conducted by the Professor of Hebrew, &c., during session 1893-94, meeting three times a week, at a fee of £2, 2s.; (3) a Junior Arabic Course, by the University Assistant in Hebrew, &c., during next summer session, at a fee of £2, 2s.; (4) Course on Classical Archæology of fifty lectures, by the Professor of Fine Art, during session 1894-95, qualifying for graduation in Honours in Classics, at a fee of £3, 3s.; (5) Course in Comparative Philology by the Professor of Sanskrit and Comparative Philology, of fifty lectures, during session 1894-95, qualifying for graduation in Honours in Classics, at a fee of £3, 3s.; (6) an Advanced Celtic Class, to meet twice a week during session 1893-94, at a fee of £1, 1s.; and (7) Course of twenty-five lectures of the Honours standard on English Literature from the death of Dryden, to be delivered during next summer session by the Lecturer on English, &c., at a fee of £2, 2s.

On the recommendation of the Senatus, the Court approved of a course in Dynamics of at least fifty meetings, for Engineering and other Science Students, to be given by Dr Knott, Lecturer in Applied Mathematics.

Dr John Lindsay Steven was recognised as a Teacher of Pathology and Practical Pathology in St Mungo's College, Glasgow, whose Course of Instruction shall qualify for graduation in Medicine in the University of Edinburgh.

The Court appointed Mr George B. Gardiner, M.A., to be Additional Examiner in Sanskrit for Graduation in Arts.

The Finance Committee reported that various accounts, awards of bursaries, &c., had been passed for payment.

The Court appointed Mr Charles D. Campbell to be Additional Examiner in Modern Languages for Graduation in Arts.

It was reported that the Faculty of Divinity had appointed the Rev. Hugh MacMillan, D.D., LL.D., to the Gunning Lectureship in Divinity for 1893-94.

Appendix.

I.—UNIVERSITY LOCAL EXAMINATIONS.

The BOARD grant Certificates of two grades, viz., JUNIOR and SENIOR, the Examinations for which are as nearly as possible on the same level as the Government Lower and Higher Grade Examinations.

The subjects of examination are divided into three classes,—PRELIMINARY SUBJECTS, SPECIAL SUBJECTS, and EXTRA SUBJECTS.

The Preliminary subjects, in which *all* Candidates must undergo Examination, are—(1) English, (2) History and Geography, (3) Latin (optional for girls), (4) Arithmetic, (5) Scripture History *or* French Grammar.

Candidates who have passed the Sixth Standard (Education Code) and the second stage of two specific subjects, of which one at least is a foreign language, are exempted from the Preliminary Examination. For a list of Certificates, granted by other Examining Boards, which exempt Candidates from this Examination, see the *Regulations* published by the Board.

The Special subjects are—(1) for JUNIOR CERTIFICATES: Department A.—Latin, Greek, French, German. B.—English, History, Geography, Scripture History. C.—Mathematics, Natural Philosophy, Physical Geography. (2) For SENIOR CERTIFICATE: A.—(as above), B.—English, History, Geography, Logic, Bible Knowledge. C.—Mathematics, Natural Philosophy. D.—Chemistry, Zoology, Botany, Physiology, Geology. E. (Commercial Certificate)—Arithmetic, Commercial History and Geography, Elements of Economics, and either French or German. Candidates for Junior and Senior Certificates must take *three* or *four* subjects,—the former selecting from at least *two* of the Departments A, B, and C, the latter from at least *two* of the Departments A, B, C, and D. One of the subjects must be chosen from Department A. The History and Geography papers are subject to special conditions, for which see *Regulations*. In Department E all the subjects must be taken before a Special Certificate is granted.

The Extra Subjects (optional) for both Certificates are Drawing and Music.

These Examinations have been instituted to supply a common test of attainment both for pupils of public schools and for those privately *educated. They are held annually, early in June, at various local centres in Scotland, England, and Ireland, and also abroad. There is no restriction as to age.*

Candidates may offer themselves for Examination in the Preliminary Subjects alone, and afterwards for the Special and Extra Subjects of the Junior or Senior Certificate; or, they may take the Preliminary, Special, and Extra Subjects, for either Certificate, at one Examination. They may afterwards add to the value of the Certificate by taking two or more subjects. A number of Bursaries are offered in connection with these Examinations.

PRIVILEGES ATTACHING TO THE CERTIFICATES.

1. The Junior and Senior Certificates exempt from the Medical Preliminary Examinations, so far as the requirements of the General Medical Council are concerned, if all the subjects required by the Council are taken at one and the same examination.[1]

2. Girls who hold the Senior Certificate are exempted from the Entrance Examination for Girton College, Cambridge.

3. Holders of the Senior Certificate above eighteen years of age are recognised as Assistants in State-aided schools.

The Board publishes a Report of the Examinations annually, containing copies of the Examination papers, lists of the successful Candidates, and Regulations for the following year. Copies of the Regulations, &c., may be had on application to the Clerk of Senatus.

H. CALDERWOOD, LL.D., } *Joint*
S. S. LAURIE, LL.D., } *Secretaries.*
G. GREGORY SMITH, M.A., *Assistant Secretary.*

II.—UNIVERSITY CERTIFICATES IN ARTS FOR WOMEN.

The Classes for the University Certificate in Arts for Women are now conducted in the University by the Professors of the subjects, and as Women may now Graduate in Arts and in Science, and may also take the Certificate of Literate in Arts, the University Certificate in Arts for Women is now open only for the purpose of enabling those who attended Classes of the Association before 1st October 1892 to complete the Certificate.

I. Candidates for the Certificates must have studied in *at least three* of the recognised Classes; and must also have passed the Senior Local Examinations of the University of Edinburgh, or of one of the other

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[1] The Certificates are not now accepted by the Scottish Universities. (See Regulations of Joint Board of Examiners.)

Scottish Universities, or of the Universities of Oxford or Cambridge; or have obtained the Lower Grade Schools Leaving Certificate of the Scotch Department in at least four subjects, and the Honours or Higher Grade Leaving Certificate of the Scotch Department in at least two subjects; or have obtained the Higher Grade Schools Leaving Certificate of the Scotch Department in at least five subjects.

II. Candidates who have passed any of the aforesaid Local Examinations may present themselves at the Examinations for the Certificate in Arts, either in *April* or in *October*—in the subjects of any one or more, or of all of the Classes attended by them. After they have passed in not less than three subjects, they will receive a University Certificate in Arts.

III. The Classes at present sanctioned and approved by the University are the following:—*Department of Languages and Literature*—English Literature, Latin, Greek, Science and History of Language; *Department of Philosophy*—Logic and Mental Philosophy, Moral Philosophy, Political Economy, Theory of Education, Fine Art; *Department of Mathematics and Physical Science*—Mathematics, Experimental Physics, Geology, and Astronomy.

IV. The University Certificates in Arts for Women are of two grades—Pass Certificates and Honour Certificates.

Honour Certificates in Arts are awarded to those Candidates who, having passed a satisfactory Examination in at least three subjects, have, in a farther and Special Examination for Honours, exhibited high proficiency in any *one* of these three subjects.

The Examinations for the Pass and Honour Certificates are the same as for the corresponding subjects of the Ordinary Degree of Master of Arts and for the Degree with Honours respectively.

V. Candidates must enter their names and addresses, and the subjects in which they wish to be examined, and exhibit their Certificates, &c., at the Matriculation Office, before 16th March and 3rd October, for the Examinations in Autumn and Spring respectively.

VI. The fee for the Certificate is two guineas. No additional fee is required for an Honour Certificate.

THE FOLLOWING OBTAINED CERTIFICATES IN APRIL 1893:—

HONOUR CERTIFICATE.

MARGARET RUSSELL HEATH—*First Class*, English Literature.

PASS CERTIFICATE.

JEANIE K. BORLAND—English Literature, Logic and Mental Philosophy, Chemistry, and Education.

Francis A. Croal—English Literature, Moral Philosophy, Natural Philosophy, and Chemistry.
Margaret Russell Heath—English Literature, Logic and Mental Philosophy, and Moral Philosophy.
Agnes Middlemass—English Literature, Chemistry, and Astronomy.
Margaret E. Oxley—English Literature, Logic and Mental Philosophy, and Moral Philosophy.
Marion S. Wilkie—English Literature, Moral Philosophy, and Education.
Isabella Skinner — English Literature, Moral Philosophy, and Chemistry.

CLASSES IN THE FACULTY OF ARTS.

The Classes in the Faculty of Arts in the University are now open to women, with the exception of a few Classes in which provision has not yet been made for teaching them.

GRADUATION IN ARTS AND IN SCIENCE.

Women are admitted to Graduation in Arts (M.A.) and in Science (B.Sc. and D.Sc.), provided they comply with the Regulations of the University thereanent.

Women who, before 1st October 1892, were Registered in the Books of the University as having regularly attended any three or more of the seven Subjects of Latin, Greek, Mathematics, Natural Philosophy, Logic and Metaphysics, Moral Philosophy, and English Literature, conducted by the Professors of the University or by their Assistants, and as having, after examination by the University Examiners for the Degree of Master of Arts, obtained the Corresponding Pass Certificate in Arts in the University for Women, will be admitted to Graduation in Arts, provided that they shall have given the required attendance at Classes, and passed the required Examinations in the remainder of the seven Subjects above specified.

LITERATE IN ARTS.

The Certificate of Literate in Arts is also open to women. (See new Regulations, page 145.)

Women who, before 1st October 1892, had regularly attended and had passed in two or more of the Subjects for Graduation in Arts under the Old Regulations, will be admitted to the Certificate of Literate in Arts, provided that they shall have given attendance in the University on other two of the said Subjects, and on one other Subject recognised for the Certificate, and have passed the required Examinations.

III.—CIVIL SERVICE OF INDIA EXAMINATIONS.

The University of Edinburgh now being one of those Institutions selected by the Secretary of State for India, in which Candidates for the Civil Service of India may pass their probation, arrangements have been made by the Senatus for the accommodation of selected candidates. Such selected candidates will be under the supervision of the Principal and Deans' Committee.

Persons desirous to be admitted as Candidates may obtain all necessary information from "The Secretary, Civil Service Commission, London, S.W.," who will supply forms of application at any time after the 1st December for the Examination following. The forms must be returned on or before 31st March.

IV.—EXAMINATIONS FOR CANDIDATES FOR THE ARMY.

In the Explanatory Memorandum of the Secretary for War, to accompany the Royal Warrant (of 30th October 1871) regulating first appointments, regimental promotion, &c., in the Army, it was announced that "A certain number of Sub-Lieutenancies a year will be allotted to Candidates who have passed the University Examination specified in the Regulations. If they also pass the Examination for the degree of B.A., they will be allowed two years' extension of the limit of age. University Candidates will be required to give at least six months' notice of their desire to be admitted into the Army. If in any year there should be more Candidates than appointments, the requisite number will be chosen by competition between the Candidates; after their appointment they will go through the same course as other Sub-Lieutenants."

In subsequent communications from the War Office it has been announced that "The Examination for M.A. at a Scottish University will be considered tantamount to passing that of B.A. at an English or Irish University;" and that "the Secretary of State for War has accepted an examination at the Scottish Universities, to be defined as 'The Examination for Candidates for the Army,' as equivalent to the examination at the English and Irish Universities for similar candidates, and that the age of such candidates may be extended to 21 years. This examination will consist of three out of the seven examinations required for the degree (M.A.) at the University of Edinburgh; but one subject out of each of the three separate Departments will have to be taken up."

In conformity with the above regulations of the War Office—1st, all who have passed the Examination for the degree of M.A. will be eligible for Commissions in the Army, and will be allowed two years' extension of the ordinary limit of age. 2nd, Those Students who have not passed the M.A. Examination may receive Certificates qualifying them for

Commissions in the Army (provided they be not more than 21 years of age) on having attended one class in each of the three Departments of the M.A. curriculum,—that is to say (*a*) either one Greek or one Latin class; (*b*) either Logic, Moral Philosophy, or Rhetoric and English Literature; (*c*) either Mathematics or Natural Philosophy,—and on passing the M.A. Examination, in either April or October, in those three subjects in which the Candidate has attended classes.[1] Candidates for the Army Certificate are not required to pass the Preliminary Examination, but unless the Candidate has passed the Preliminary Examination the Certificate will not qualify in any subject for Graduation in Arts.

The names of intending Candidates for Certificates must be given in and fees paid at the *Matriculation Office* at the same time as those of Candidates for the M.A. Examinations.

The Fee for the Examination is two guineas.

Candidates may be exempted from the Preliminary Examination in all subjects except geometrical drawing, if they can produce a certificate of having passed the Preliminary Examination in general education required of Candidates for graduation in Medicine at the University of Edinburgh, when the Candidate has passed in all the subjects of the Army Preliminary Examination at not more than two examinations.

V.—SYLLABUS OF SUBJECTS OF EXAMINATION FOR STUDENTS OF DIVINITY AND CANDIDATES FOR LICENCE BY PRESBYTERY OF EDINBURGH.

⁂ *The Examinations shall be conducted mainly in writing.*

An average of not less than 40 *per cent. over all the subjects, and a minimum of* 30 *per cent. in each shall be necessary to a pass, except in Biblical Knowledge, in which* 50 *per cent. shall be the minimum.*

The Examinations, by the favour of the Senatus, will be held in the Examination Hall of the University.

I.—FOR STUDENTS ENTERING THE DIVINITY HALL.

1. BIBLICAL KNOWLEDGE.—Genesis to 2 Samuel, and the Four Gospels.
2. THE SHORTER CATECHISM.

II.—FOR STUDENTS ENTERING UPON THEIR SECOND YEAR.

1. LATIN.—Augustine—Enchiridion.
2. GREEK.—The Epistle to the Colossians as in Lightfoot.

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[1] See Regulations for Degree of M.A.

3. HEBREW.—Davidson's Grammar, 1-31; Genesis, i.-ix.

4. DIVINITY.—Confession of Faith, 1-15; Flint's Theism; Row's Manual of Christian Evidences.

5. BIBLICAL KNOWLEDGE.—1 Kings to Nehemiah, and Acts of the Apostles.

6. CHURCH HISTORY.—History of the Church to 325 A.D.

III. FOR STUDENTS ENTERING UPON THEIR THIRD YEAR.

1. LATIN.—Anselm—Cur Deus Homo.

2. GREEK.—St John's Gospel to be read critically, with discussions as to date and authorship.

3. HEBREW.—Davidson's Grammar, 32-49; Psalms i.-xv.

4. DIVINITY.—Confession of Faith, 16-33; The Trinity; The Person of Christ.

5. BIBLICAL KNOWLEDGE.—The Mosaic Ritual and the Prophets.

6. CHURCH HISTORY.—The Reformation Period, with special reference to Scotland.

IV.—FOR CANDIDATES FOR LICENCE.

1. LATIN.—Augustine's Confessions, Book IX.

2. GREEK.—First Epistle ot St John, to be read critically.

3. HEBREW.—The Psalms of Degrees.

4. DIVINITY.—Scripture Doctrine of the Atonement. By Professor Crawford.

5. PASTORAL THEOLOGY.—The Pastor as Preacher. By Dr H. W. Smith.

6. CHURCH LAW.—Mair's Digest, Chapters II. and IV.; "Matters affecting all the Courts;" and "The Kirk-Session."

N.B.—By Act of Assembly XX., 1889, all Students of Theology who have completed the prescribed course of Theological instruction shall, before applying to any Presbytery to be taken on trials for licence, be examined by the Synodical Committees already existing for examination of Students entering the Divinity Hall. The Convener of the Edinburgh Synodical Committee is the Rev. Dr Alison, who will give the necessary information.

VI.—THE EDINBURGH UNIVERSITY UNION.

President—Jas. G. Cattanach. *Hon. Secretary*—John A. Laing. *Treasurer*—W. A. Wood, C.A., 28 Frederick Street.

COMMITTEE OF MANAGEMENT—*Senatus*—Professors Annandale and Butcher. *General Council*—Dr J. H. A. Laing, J. A. Clyde, LL.B.; Dr C. W. Cathcart, Dr A. L. Turner. *Matriculated Students*—W. E. Fothergill, H. Melvil Green, G. A. Cohen, O. H. Isard, J. Aarons, J. G. C. Scott.

The Union is open to all Students and Graduates of the University, and its purpose is "the provision and maintenance of means of social and academic intercourse for its members." The Building, which includes a large hall (in which the debates are held), luncheon, smoking, and reading-rooms, is situated in Park Street, near both the old and the new buildings. The reading-room is amply supplied with newspapers, and with the weekly, monthly, and quarterly periodicals; the smoking-room is furnished with two billiard tables, and the library contains University, Class, Text, and Reference Books.

Terms of Membership.—By payment of an entry-money of 5s. and an Annual Subscription of 10s. 6d. if a Matriculated Student, or £1, 1s. if a Graduate, University Assistant, or Lecturer.

AFFILIATED SOCIETIES.

The Edinburgh University Union Dramatic Society.

University of Edinburgh Union Literary Society.

The following University Societies and Associations, though not affiliated with the Union, have been granted certain privileges for the transaction of Business in the Union:—Athletic Club, Conservative Association, Liberal Association, Chemical Society, and Musical Society.

Full particulars as to affiliation, &c., on application at the Union.

VII.—STUDENTS' REPRESENTATIVE COUNCIL.

FOUNDED 1884.

The aims of the Council are—(1.) To represent the students in matters affecting their interests; (2.) To afford a recognized means of communication between the students and the University authorities; and (3.) To promote social life and academic unity among the students. The Council is elected annually in November, partly by the students of the different Faculties, and partly by the recognised students' societies. Meetings are held in November, December, January, February, March, May, June, July, and October. At the November meeting an executive committee is elected, consisting of three presidents, two secretaries and treasurers, and ten other members, representing the four Faculties.

Presidents—A. A. Scot-Skirving; D. Milne Watson, M.A.; C. R. Gillies-Smith, M.A. *Secretaries and Treasurers*—R. D. Melville, 5 West Castle Road; George Henderson, M.A., Lochview House, Newington.

DIRECTORY OF STUDENTS' LODGINGS.

(Under the Management of the Students Representative Council.)

This Directory (containing terms, references, and full particulars) lies open for inspection by Students in the Students' Common Room at the University New Buildings.

VIII.—STATISTICS OF THE RECTORIAL ELECTIONS IN THE UNIVERSITY OF EDINBURGH, 1859-1890.

1859.—*Gladstone*, 642.—*Neaves*, 527. Matriculated students, 1302.
1862.—*Gladstone* (*unopposed*). Matriculated students, 1331.
1865.—*Carlyle*, 657.—*Disraeli*, 310. Matriculated students, 1288.
1868.—*Moncreiff*, 607.—*Ruskin*, 425. Matriculated students, 1398.
1871.—*Maxwell*, 594.—*R. Palmer*, 502. Matriculated students, 1533.
1874.—*Derby*, 770.—*Playfair*, 583. Matriculated students, 1767.
1877.—*Hartington*, 932.—*Cross*, 684. Matriculated students, 2102.
1880.—*Rosebery*, 1024.—*Christison*, 985. Matriculated students, 2496.
1883.—*Northcote—Blackie—Trevelyan*. Matriculated students, 2660.
1886.—*Iddesleigh*, 1094.—*Playfair*, 747. Matriculated students, 2680.
1887.—*Lothian* (*unopposed*). Matriculated students, 2493.
1890.—*Goschen*, 1378.—*Russell*, 805. Matriculated students, 3038.

IX.—ROYAL MEDICAL SOCIETY, EDINBURGH.

Founded 1737. Royal Charter granted 1778.

Presidents—A. N. S. Carmichael, M.B., C.M.; J. W. Crerar, M.B., C.M.; Harry Rainy, M.A., M.B., C.M., B.Sc.; J. S. Fowler, M.B., C.M., M.R.C.S. *Secretaries*—G. L. K. Pringle; D. C. Bremner, M.B., C.M. *Treasurer*—J. R. Young, Esq.

The Society meets in its hall every Friday evening during the Winter at 9 o'clock. At these meetings dissertations on medical subjects are read and debated, and communications by members on subjects of interest discussed. The Society possesses a very fine library, containing about 30,000 volumes, which is constantly being added to. There are comfortable writing and reading-rooms with all the medical journals and periodicals, books of reference and text-books specially useful to students reading for examinations. The museum contains a complete collection of Materia Medica specimens, microscopic sections, pathological preparations, herbarium, and a surgical model, on which bandaging, setting of fractures, &c., may be practised.

X.—INTERNATIONAL-ACADEMIC COMMITTEE.

The Principal and Deans Committee of the Senatus and the International Academic Committee of the Students' Representative Council are prepared to give all the assistance and information in their power to Foreigners desirous of studying in the University of Edinburgh, and to

Edinburgh University Students desirous of studying in foreign universities. Inquiries may be addressed in writing to the Secretary of Senatus, or to the Convener International-Academic Committee, Students' Representative Council, University of Edinburgh.

XI.—ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY OF EDINBURGH.

President—The Right Hon. Arthur James Balfour, D.C.L., LL.D., M.P., Chancellor of the University. *Vice-Presidents* — The Right Hon. The Earl of Wemyss, LL.D, ; The Right Hon. The Earl of Stair, K.T. ; The Right Hon. The Earl of Rosebery, LL.D. ; The Right Hon. Lord Moncreiff, LL.D. ; Sir John Don-Wauchope, Bart. ; Sir James Gardiner Baird, Bart. ; *Principal Sir William Muir, K.C.S.I., D.C.L., LL.D.

Ordinary Members of the General Committee — (Members of the Acting Committee are marked thus *.)—The Right Hon. John B. Balfour, Q.C., LL.D., M.P. ; Edmund Baxter, Esq., W.S. ; *Donald Beith, Esq., W.S. ; *R. Fitzroy Bell, Esq., Advocate ; A. W. Black, Esq. ; John Boyd, Esq. ; *Sir Thomas J. Boyd ; John Carment, Esq., LL.D., S.S.C. ; Professor Chiene, F.R.C.S.E. ; *D. Christison, Esq., M.D. ; *John Christison, Esq., W.S. ; The Hon. Lord Rutherfurd Clark, LL.D. ; Sir Thomas Clark, Bart. ; *Charles Cook, Esq., W.S. ; *Henry Cook, Esq., W.S. ; *R. Cameron Cowan, Esq., C.A. ; Donald Crawford, Esq., M.P., Advocate ; John Duncan, Esq., M.D. ; *J. R. Findlay, Esq. ; *The Rev. Archibald Fleming ; *John Harrison, Esq. ; James Hope, Esq., W.S. ; The Hon. Lord Kinnear, LL.D. ; *Æ. J. G. Mackay, Esq., LL.D., Advocate, Sheriff of Fife ; *The Hon. Bouverie F. Primrose, C.B. ; *Charles Robertson, Esq., B.C.S. ; *Robert Simson, Esq., B.C.S., *George Smith, Esq., LL.D., C.I.E. ; James Walker, Esq. of Dalry. *Hon. Secretary*—*Sir Alexander Christison, Bart., M.D. *Acting Secretary*—Robert G. Scott, W.S., 61 North Castle Street.

Local Honorary Secretaries—A. Mercer Adam, Esq., M.D., Boston, Lincolnshire ; John Beddoe, Esq., M.D., LL.D., F.R.S., The Chantry, Bradford-on-Avon ; Hugh Cleghorn, Esq., M.D., Stravithy, St Andrews ; Sir Dyce Duckworth, M.D., 11 Grafton Street, Piccadilly, London ; Peter Gardner, Esq., W.S., 153 St Vincent Street, Glasgow ; A. F. Hutchison, Esq., Stirling ; James Tait, Esq., W.S., Kelso.

Terms of Membership—Life Subscription, Ten Guineas ; Annual Subscription, One Guinea. Subscriptions and Donations in excess of these Sums are earnestly solicited by the Committee.

XII.—UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME.

At a Meeting of the Acting Committee for this Scheme, held on 16th November 1885, it was resolved to apply to Parliament for power to acquire houses in Park Street adjoining the present New Buildings as a site upon which to erect a University Hall; and under the Edinburgh University Buildings Extension Act, 1886, the following Members of the Committee, viz.:

Principal Sir W. MUIR, K.C.S.I., D.C.L.,
WILLIAM M'EWAN, Esq., M.P.,
Professor Sir WILLIAM TURNER, D.C.L.,
JOHN CHRISTISON, Esq., W.S.,

were incorporated as Trustees by the name of the EDINBURGH UNIVERSITY BUILDINGS EXTENSION TRUSTEES, for the purpose of acquiring the property in question and erecting the Hall.

Mr M'Ewan munificently offered to contribute the sum required to erect the Hall as originally contemplated, and in completion of the architect's design, upon condition of the cost of the site being provided otherwise. The Government was approached on the subject, and a Parliamentary grant of £8000 towards the cost of the site was obtained. Mr M'Ewan having provided the balance required, the site was purchased. Plans for the erection of the Hall by R. Rowand Anderson, LL.D., Architect, were approved of and contracts entered into, and the work is now being proceeded with. By resolution of the Senatus Academicus, the new Hall will be named the "M'Ewan Hall," in grateful recognition of the founder's benefaction.

GEORGE SOMERVILLE, City Chambers,
Clerk to Trustees.

XIII.—UNIVERSITY SOCIETIES AND CLUBS.

i.—THE AGRICULTURAL SOCIETY.

ESTABLISHED 1858.

Honorary President—John Hunter, F.I.C., F.C.S. *President*—Robert Affleck. *Vice-President*—E. M. Arnold. *Secretary*—William Semple, M.A., B.Sc. *Treasurer*—L. R. Wilson.

This Society meets weekly on Mondays during the Winter Session at 8 P.M.

ii.—ARTS STUDENTS' CHRISTIAN ASSOCIATION.

Hon. President—Professor Marcus Dods, D.D. *President*—C. M. Jack. *Secretary*—Malcolm Campbell, 3 Moston Terrace. *Treasurer*—J. S. M'Knight.

iii.—ASSOCIATED SOCIETIES OF THE UNIVERSITY.

This Association was instituted in 1833, and is a Union of Literary and Debating Societies. It is composed at the present date of six societies:—The Dialectic, Scots Law, Diagnostic, Philosophical, Philomathic, and Celtic Societies. The following is the list of the Office-Bearers of the Association, and of the respective component societies:—

Honorary President—Professor David Masson, LL.D. *Hon. Vice-Presidents*—The Senatus Academicus of the University (*ex officiis*). *Secretary*—A. J. Louttit Laing, M.A., Glenord, Spylaw Road, Merchiston.

(1.) DIALECTIC SOCIETY.—Instituted in 1787.

Presidents—A. J. Louttit Laing, M.A.; J. W. Tullo; D. G. Hamilton, M.A.; M. W. Henderson; J. Y. Simpson. *Secretary*—Robert Lindsay Ross. *Treasurer*—A. Kinnaird Tod.

This Society meets in the Societies' Hall every Thursday Evening at 8 o'clock, for the prosecution of Literary and Philosophical Composition, Criticism, and Debate.

(2.) SCOTS LAW SOCIETY.—Instituted in 1815.

Presidents—J. W. M. Loney, Solicitor; William Brown, M.A., LL.B., Advocate; G. Fleming Mathers, M.A., LL.B. *Secretary*—James Begg, S.S.C., 6 North Charlotte Street. *Assistant-Secretary*—A. Blairford Smith, M.A., 63 Castle Street. *Treasurer and Librarian*—Arthur S. Orr, S.S.C., 3 North St Andrew Street.

This Society meets every Monday Evening during the Winter Session, at 8.30 o'clock, for the purpose of debating and reading Essays.

(3.) DIAGNOSTIC SOCIETY.—Instituted in 1816.

Presidents—G. M. Stuart, T. B. Whitson, P. B. Carphin, H. G. H. Sprott. *Secretary*—J. A. G. Miller. *Treasurer*—H. Tod.

This Society meets every Tuesday Evening during the Winter Session, at 9 o'clock, in the Associated Societies' Hall, for the purpose of debating and reading Essays.

(4.) PHILOSOPHICAL SOCIETY.—Instituted in 1871.

Honorary Presidents—The Principal, Emeritus-Professor Campbell Fraser, Professors Calderwood and Seth, and the Gifford Lecturer. *Senior Presidents*—H. Barker and H. R. Mackintosh. *Junior Presidents*—A. B. Macaulay and J. Barrett. *Secretary*—H. P. Macmillan. *Treasurer*—Sydney Smith.

This Society meets in the Associated Societies' Hall every alternate Wednesday evening during the Winter Session, at 8 o'clock, for Philosophical Criticism and Investigation.

(5.) PHILOMATHIC SOCIETY.—INSTITUTED IN 1858.

Presidents—A. C. Dawson, M.A.; T. M. Ness, M.A.; and J. N. Rae. *Secretary*—J. H. Guild; *Assistant-Secretary*—H. MacDonald. *Treasurer*—A. G. Fraser.

This Society meets in the Societies' Hall every Friday evening during the Winter Session, at 8 P.M., for the purposes of debating and reading Essays; and is open to all who are, or have been, Matriculated Students of the University of Edinburgh.

(6.) CELTIC SOCIETY.—INSTITUTED 1848.

Honorary President—Professor Mackinnon. *Presidents*—Archibald Macleod, Thomas Fraser, J. Gregory Nicolson. *Secretary*—Donald Duncan; *Assistant-Secretary* — David Duncan. *Treasurer* — James Tolmie.

This Society meets in the Societies' Hall every Saturday evening during the Winter Session, at 7 P.M., for debating and reading Essays. Literary business conducted in Gaelic three nights in the Session.

iv.—ATHLETIC CLUB.

President—Dr J. H. A. Laing. *Treasurer*—C. E. W. Macpherson. *Secretary*—W. D. Barrow.

Open to all Members and Graduates of the University, and to Students of the Extra-Mural School. The *sections* of the Club are—

1. FOOTBALL (Rugby)—*Secretary*—C. B. Scott. (Association)—*Secretary*—R. Hutchison. 2. CRICKET—*Secretary*—E. M. Skeete. 3. CYCLING—*Secretary*—M. C. Seton, University Union. *Captain*—J. M. Taylor. 4. LAWN TENNIS—*Secretary*— 5. SWIMMING—*Secretary*—B. J. G. Sibbald. 6. HARE AND HOUNDS—*Secretary*—J. G. Ross. 7. GOLF (affiliated)—*Secretary*—R. J. Bryce. 8. ROWING—*Secretary*—

Field at Corstorphine. Gymnasium at University Union. Address all communications to *Sec.*, University Union.

v.—BATTERY SHOOTING CLUB.

Honorary President—Professor J. Cossar Ewart, M.D. *President*—Sergeant-Major E. E. Waters. *Secretary and Treasurer*—G. G. Irving, University Union, Park Place.

Open to all Members of No. 2 (University) Battery, 1st E.C.A.V. Prizes are offered regularly for shooting at the regimental targets in Hunter's Bog, and for 16-pounder shooting at Caroline Park, Granton. Also in Camp at Barry, prizes are offered by the Scottish National Artillery Association.

vi.—CAITHNESS STUDENTS' ASSOCIATION.

INSTITUTED IN 1837.

Honorary President—His Grace the Duke of Portland. *President*—J. Gregory Nicolson. *Secretary*—Alexander Doull. *Treasurer*—Charles S. Findlay.

This Association meets in the Public Law Class Room, fortnightly, on Saturdays, at 3.30 P.M., during the Winter Session, for the purpose of debating, reading Essays, and the advancement of education in the North of Scotland.

vii.—CHEMICAL SOCIETY.

INSTITUTED 1874.

President—Professor A. Crum Brown, M.D., D.Sc. *Vice-Presidents*—Leonard Dobbin, Ph.D., F.R.S.E.; Hugh Marshall, D.Sc., F.R.S.E. *Librarian*—Theodore Rettie, B.Sc. *Secretary*—A. F. Watson. *Treasurer*—J. W. Tullo.

This Society holds fortnightly meetings, at 8 P.M., during the Winter Session, for the reading and discussion of papers on Chemistry and allied sciences.

Excursions to Chemical Works, &c., during the Summer Session.

viii.—DARWINIAN SOCIETY.

President—I. Bayley Balfour, M.D., D.Sc., F.R.S., Professor of Botany. *Chairman*—J. S. Flett, M.A., B.Sc. *Vice-Chairman*—W. B. Gubbin, M.D. *Treasurer*—Jas. Adamson, M.A., B.Sc. *Secretaries*—E. F. Bashford, Gustav Mann, M.B., C.M.

The Society meets every alternate Wednesday evening, at 8 P.M., in the Senior Natural History Class-Room, and is open to all who are, or have been, matriculated students of this University.

ix.—DUMFRIESSHIRE AND GALLOWAY LITERARY SOCIETY.

INSTITUTED 1847.

Presidents—Douglas Wilson, John Proudfoot, R. Gordon M'Kerron, James Caesar. *Joint-Hon. Secretaries*—Stuart M'Donald, W. Macbeth Robertson. *Hon. Treasurer*—M. H. M'Kerrow.

The Society meets every Saturday evening during the Winter Session. at 7 o'clock, in the Public Law Class-Room.

x.—FREE CHURCH SOCIETY.

INSTITUTED 1886.

Honorary President—Rev. Dr Whyte. *Presidents*—J. H. Scott, Ewen Fraser. *Secretary*—G. R. T. Ross. *Assistant Secretary*—D. U. Crerar. *Treasurer*—H. M'D. Ross.

This Society meets every Saturday evening during the Winter Session, at 7 o'clock, in Dr Moxey's Class-Room, F.C. College, Mound, for the purpose of debating and reading Essays.

xi.—MEDICAL STUDENTS' CHRISTIAN ASSOCIATION.

Honorary President—Professor Grainger Stewart, M.D. *Honorary Vice-Presidents*—Professors Sir D. Maclagan, M.D.; Crum Brown, M.D.; Greenfield, M.D.; Simpson, M.D.; Chiene, M.D.; Dr A. G. Miller, Dr C. W. Cathcart, Dr A. H. F. Barbour, Dr Peel Ritchie, Dr J. W. Ballantyne. *President*—T. Gibson, M.A., 1 Bright's Crescent. *General Secretaries*—J. E. Bowes, 3 Livingstone Place; B. L. Livingstone-Learmonth, 88 Polwarth Gardens. *Ward Service Secretaries*—A. G. Fenn, 164 Dalkeith Road; E. de C. Prout, 59 Marchmont Road. *Treasurer*—H. M. Eyres, 8 Carlung Place.

The object of this Association is, stated briefly, to form a bond of union between Medical Students whose principles and aim in life are "Christian." All Medical Students approving of this object are invited to enrol their names as members.

xii.—MISSIONARY ASSOCIATION.—Instituted 1825.

Honorary President—Principal Sir W. Muir, K.C.S.I., D.C.L. *Honorary Vice-Presidents*—Professors Charteris, Dobie, Butcher, and Sir Douglas Maclagan. *President*—John Hunter, M.A. *Vice-President*—John Henry Dickie, M.A. *Treasurer*—W. Melville Syme, C.A., 49 N. Castle Street. *Secretary*—D. G. Hamilton, M.A., 10 Glengyle Terrace. *Assistant Treasurer*—T. Marjoribanks, M.A. *Assistant Secretary*—J. K. Wilkin, M.A. *Librarian*—J. E. Mackay, M.A. *Assistant Librarian*—Hugh Reid.

The Association meets to transact business, in the Public Law Class-Room on alternate Saturdays, at 10 o'clock.

xiii.—MUSICAL SOCIETY.—Established 1867.

Patron—H.R.H. The Duke of Edinburgh.

President—Professor Niecks. *Vice-Presidents*—Principal Sir W. Muir, K.C.S.I.; Professors Annandale, Armstrong, Butcher, Calderwood, Flint, Kirkpatrick, Maclagan, Rutherford, Emeritus-Professor Sir Herbert S. Oakeley; and D. Hepburn, M.D. *Hon. or Corresponding Vice-Presidents*—The President of Aberdeen University Musical Society; Prof. Sir Robert Stewart, Dublin, and Prof. Sir John Stainer, Oxford. *Hon. Treasurer*—W. C. Sillar, M.B. *Hon. Secretary*—A. Douglas Thomson, M.A.

Practice every Friday, during the Winter Session, in the Hall of the University Union,—Choral at 4.30 P.M., Orchestral at 5.45 P.M. These hours are subject to alteration at the general meeting held at the beginning of the Winter Session.

xiv.—PHYSICAL SOCIETY.

Presidents—Cargill G. Knott, D.Sc., F.R.S.E.; J. C. Beattie, B.Sc. *Secretary and Treasurer*—Alex. Shand, Physical Laboratory.

This Society meets every third Tuesday, during the Session, at 8 P.M., for the discussion of subjects connected with Mathematical and Experimental Physics.

xv.—PHOTOGRAPHIC SOCIETY.

Honorary President—Professor A. Crum-Brown. *President*—Dr Thomas Drinkwater. *Vice-President*—Dr Logan Turner. *Secretary and Treasurer*—Mr H. Overton Hobson.

All past and present Students eligible. Dark-rooms, Studio, &c., at 3 Bristo Place, free to Members at any time. Monthly meetings during sessions. Excursions in summer time.

xvi.—RIFLE COMPANY SHOOTING CLUB.

INSTITUTED 1873.

Honorary President—Lieut.-Col. Sir Wm. Turner. *President*—Captain I. B. Balfour. *Vice-Presidents*—Captain J. P. Bannerman, and Lieutenant E. H. Robertson. *Secretary and Treasurer*—Lieutenant J. A. Hope. *Committee*—Col.-Sergeant H. G. Melville, Lance-Corporals G. Grey and J. A. Benson; Privates J. Bowie, D. Menzies, and Peach.

This Club is open to members of No. 4 (University Co.) Q.R.V.B.R.S. Weekly competitions at Hunter's Bog. Prizes given at the end of the season for best aggregate scores, and a silver teaspoon for each weekly competition.

xvii.—SHINTY CLUB.

Patrons—His Grace the Duke of Sutherland; The Honourable the Master of Blantyre; A. H. Stein, Esq., of Kirkfield, Lanark; Dr MacGregor, M.P., Inverness-shire; Lewis MacIver, Esq., Edinburgh. *President* — Emeritus-Professor Blackie. *Vice-President* — Professor Mackinnon. *Captain*—Hugh Gunn. *Vice-Captain*—James Affleck. *Secretary*—J. M. Macdonald, 72 Findhorn Place.

Membership is open to all past and present Students of the University. Practice at Inverleith Park on Saturday afternoons.

xviii.—THEOLOGICAL SOCIETY.—INSTITUTED 1776.

Honorary President—Rev. Professor Flint, LL.D. *Honorary Vice-Presidents*—Rev. Professor Charteris, D.D.; Rev. Professor Taylor, D.D.; Rev. Professor Dobie, B.D. *Presidents*—Robert Venters M.A.; Henry Barker, M.A.; John Ritchie, M.A.; J. E. Mackay M.A. *Secretary*—Thomas Marjoribanks, M.A. *Treasurer*—W. Pennell, M.A.

This Society is open to present and past Students of any Theological Seminary. It meets every Friday evening during the Winter Session, at 8.30 P.M., for debates and discussions on questions of Theology, Church History, Biblical Criticism, General Ecclesiastical Polity, and kindred subjects.

xix.—UNIVERSITY HALL.

2 MOUND PLACE and RIDDLE'S COURT (5 Victoria Terrace).

FOUNDED MAY 1887.

University Hall is designed as a social residence for students. Both buildings are situated within a short distance of the University. The accommodation includes common rooms, private studies, and bedrooms. The rents range from 7s. to 16s. per week. The cost of board averages 12s. 6d. each per week.

The external affairs of the Hall are in the hands of the following Consulting Committee :—Lord Stormonth Darling ; Professors Butcher, Chiene, Kirkpatrick, Crum-Brown, Geddes ; Æneas Mackay, Esq. ; R. Fitzroy Bell, Esq. ; W. K. Dickson, Esq. ; Dr George Mackay, Dr Hunter Stewart, James Macdonald, Esq. ; R. C. Gray, Esq., S.S.C. ; J. F. Mackay, Esq., W.S. ; Dr Caird, and three representatives from those in residence. J. Arthur Thomson, Esq., is Secretary of this Committee.

The internal affairs are managed by a committee of residents elected monthly. Application for admission should be made to the Hon. Sec. at University Hall.

xx.—UNIV. U.P. STUDENTS' SOCIETY.—INSTITUTED 1843.

Honorary Presidents—Professor Crum Brown, M.D., LL.D. ; Rev. Professor Henry Calderwood, LL.D. ; Rev. John Hutchison, D.D. ; Rev. A. B. Cameron, B.D. *President*—William Watson. *Vice-Presidents*—A. B. Macdonald, J. B. Russell. *Joint Secretaries and Treasurers*—T. Lorimer Beveridge, Edwin Rogerson.

The Society meets every Saturday evening during the Winter Session, in the U.P. College Buildings, Castle Terrace, at Seven o'clock.

XIV.—COMMISSIONERS' ORDINANCES UNDER THE UNIVERSITIES (SCOTLAND) ACT, 1889, as laid before Parliament, which may come into operation on 1st October 1893.

I. Ordinance No. 21. [Edinburgh, No. 3.—Regulations for Degrees in Science in Engineering.]

At Edinburgh, the 19*th day of December* 1892 *years.*

Whereas by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-section 5, to regulate the management and ordering of the Universities, and the manne- and conditions in and under which students shall be admitted theretor and in particular the course of study and manner of teaching, the length of the academical session or sessions, the manner of examination, the qualifications, appointment, and number of Examiners, and the amount and manner of their remuneration, the granting of degrees, and the institution of new degrees ; the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations :

Therefore the Commissioners under the said Act statute and ordain with regard to the University of Edinburgh as follows :

I. Two degrees in Science in Engineering may be conferred by the University of Edinburgh—viz., Bachelor of Science in Engineering and Doctor of Science in Engineering.

II. Every candidate for the degree of Bachelor of Science in Engineering must pass the Preliminary Examination[1] prescribed by Ordinance No. 11 [General No. 6.—Regulations for Degrees in Arts] ; and the conditions with respect thereto imposed by the said Ordinance shall be applicable in all respects to this Ordinance except as follows : —(1) French or German may be substituted for Latin or Greek ; (2) Mathematics shall be passed on the higher standard ; (3) a degree in Arts (not being a degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court after consultation with the Senatus Academicus, shall exempt from the Preliminary Examination ; (4) the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

III. (1) Candidates must, in the course of not less than three

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[1] See Preliminary Examination, pages 110, 119, 122, and App. p. 22.

Academical years within the meaning of the Ordinance hereinbefore first mentioned, attend at least the eleven courses of instruction prescribed under Section VIII. of this Ordinance.

(2) It shall be the duty of the Senatus to determine from time to time which of the said courses shall be full and which shall be half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Edinburgh, and must include the necessary courses in Engineering, except where the University Court, after consultation with the Senatus, sees fit to allow one of the courses in Engineering to be taken outside the University under the provisions of the immediately succeeding subsection.

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Engineering: Provided that the fees for attendance at an approved Institution in Edinburgh or under a recognised teacher there shall not be less than the fees exigible for the corresponding courses in the University of Edinburgh.

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved institutions or by recognised teachers in Edinburgh to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University; a right to the use of the Library of the University.

VI. (1) It shall be the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It shall be the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science to be hereafter constituted in the University, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science shall transmit such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval: Provided that, until the Faculty of Science shall be duly constituted, the syllabus shall be submitted by the Professors and Lecturers directly to the Senatus.

VII. The provisions of the preceding section shall not apply to approved Institutions or recognised teachers outside Edinburgh; but the University Court shall not grant or continue recognition to any Institutions or teachers unless it shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh.

VIII. The subjects of study shall be as follows :—

1. Mathematics, including Analytical Geometry, and Differential and Integral Calculus.
2. Natural Philosophy, including Applied Higher Mathematics.
3. Chemistry.
4. A course in the Physical Laboratory or in the Chemical Laboratory, or of Practical Chemistry.

5, 6. Two Courses in Practical work in Drawing.

7, 8, 9. Three Courses in Engineering, including Engineering Laboratory Practice, and Field Work.

10. Natural Philosophy, involving Higher Mathematics.
11. One of the following :—
    - (*a*) Engineering Laboratory Practice, Mechanical or Electrical (Special Course).
    - (*b*) Electricity—Pure and Applied.
    - (*c*) Geology and Mineralogy.

IX. (1) There shall be a First Science Examination in the three following subjects, viz.:—(1) Mathematics, (2) Natural Philosophy, (3) Chemistry; and the examinations in Natural Philosophy, and in Chemistry shall so far as possible be practical.

The examination in Geometrical Drawing may be taken either at the First or at the Final Science Examination.

2) The examination in Mathematics shall include the higher branches of Mathematics specified under Mathematics in the Section immediately preceding; but it shall be optional to Candidates to pass the same examination in this subject as that required for the ordinary Degree of Master of Arts, provided that in that case they shall be required, before graduation, to pass an examination in the remainder of the subject.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

X. (1) There shall be a Final Science Examination in the remaining subjects specified in Section VIII. hereof; and, if required, in the higher branches of Mathematics as provided in Section IX., Subsection 2 hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the whole of the subjects comprised in the First Science Examination and have attended the required courses in the subjects professed, provided that for this purpose subjects 5, 6, 7, 8, and 9, specified in Section VIII., shall form one subject.

XI. A candidate for the degree of Bachelor of Science in Engineering shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. It shall be competent to the Examiners for the degree of Bachelor of Science in Engineering to report that a candidate has passed with special distinction in one or more of the subjects professed by him ; and in such a case a diploma shall be given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

XIII. It shall be competent to the University Court of the University of Edinburgh to modify from time to time the provisions as to curriculum hereinbefore contained, in case such modification shall be rendered desirable by the development of Engineering Science, or in consequence of further provisions having been made within or without the University for the study of any branch of the said Science : Provided that in no case shall the number of full courses of study required be less than the number required for the degree of Bachelor of Science in Pure Science, as specified in Ordinance No. 12 [General No. 7.—Regulations for Degrees in Science.]

DOCTORATE OF SCIENCE IN ENGINEERING.

XIV. Graduates of the University of Edinburgh who have held the degree of Bachelor of Science in Engineering for a term of five years, may offer themselves for the degree of Doctor of Science in Engineering in the said University.

XV. A Candidate for the degree of Doctor of Science in Engineering shall present a Thesis or a published memoir or work to be approved by the Senatus (on the recommendation of the Faculty of Science when duly constituted) : Provided that, if required by the Senatus, the candidate shall be bound to pass such an examination as may from time to time be determined. The Thesis shall be a record of original research undertaken by the candidate, or of important engineering work designed by himself, and actually carried out, and shall be accompanied by a declaration, signed by him, that these conditions have been satisfied.

GENERAL.

XVI. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the degrees of Bachelor of Science in Engineering and Doctor of Science in Engineering, as the case may be, on the payment of the fees required.

XVII. A student who, at the time when this Ordinance shall come into operation, shall have completed a part of his course of study with a view to graduation in Science in Engineering in the University of Edinburgh, under regulations in force at the time therein, and shall thereafter complete his course of study and pass the necessary examinations in conformity with such regulations, or with the provisions of this

Ordinance, may become a Candidate for the degree of Bachelor of Science in Engineering.

XVIII. The degrees of Bachelor and Doctor of Science in Engineering shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum.*

XIX. This Ordinance shall come into force from and after the date on which it is approved by her Majesty in Council.

In witness whereof these presents are sealed with the seal of the Commission.

A. S. KINNEAR,
Chairman.

L. S.

II. Ordinance No. 22. [Edinburgh, No. 4—Regulations for Degrees in Science in Agriculture.]

At Edinburgh the 19*th day of December* 1892 *years.*

Whereas by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, subsection 5, to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto; and in particular (*b*) the course of study and manner of teaching; the length of the academical session or sessions; the manner of examination; the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration: (*d*) the granting of degrees and the institution of new degrees; (*e*) the institution of an examination, either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations:—

Therefore the Commissioners under the said Act statute and ordain as follows:—

I. A degree of Bachelor of Science in Agriculture may be conferred by the University of Edinburgh.

II. Every candidate for the degree of Bachelor of Science in Agriculture must pass the Preliminary Examination[1] prescribed by Ordinance, No. 11 [General, No. 6—Regulations for Degrees in Arts]; and the conditions with respect thereto imposed by the said Ordinance shall be applicable in all respects to this Ordinance, except as follows:—(1) French or German may be substituted for Latin or Greek; (2) Mathematics shall be passed on the higher standard; (3) a degree in Arts (not being a degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court after consultation with the Senatus Academicus, shall exempt from the Preliminary Examination ; (4) the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

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[1] See footnote, App. p. 18.

III. (1) Candidates must in the course of not less than three Academical years, within the meaning of the Ordinance hereinbefore first mentioned, attend at least eleven courses of instruction, in subjects prescribed for examination under Section VIII. of this Ordinance.

(2) It shall be the duty of the Senatus to determine from time to time, which of the said courses shall be full courses and which shall be half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Edinburgh, and must include the course in Agriculture and Rural Economy.

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Agriculture : Provided that the fees for attendance at an approved Institution in Edinburgh or under a recognised teacher there shall not be less than the fees exigible for the corresponding courses in the University of Edinburgh.

(3) Residence and practical work at a farm shall be required of each candidate to such an extent and under such regulations as the Senatus, with the approval of the University Court, may from time to time appoint.

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved Institutions or by recognised teachers in Edinburgh, to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University, a right to the use of the Library of the University.

VI. (1) It shall be the duty of the Professors and Lecturers annually, at the end of each winter session, to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It shall be the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science to be hereafter constituted in the University, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science shall transmit such

syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval : Provided that, until the Faculty of Science shall be duly constituted, the syllabus shall be submitted by the Professors and Lecturers directly to the Senatus.

VII. The provisions of the preceding section shall not apply to approved institutions or recognised teachers outside Edinburgh ; but the University Court shall not grant or continue recognition to any Institutions or teachers unless it shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh, where such exist.

VIII. The subjects of study shall be as follows :—

1. Mathematics, or Biology (*i.e.*, Zoology and Botany).
2. Natural Philosophy.
3. Chemistry.
4. Agriculture and Rural Economy.
5. Agricultural Chemistry.
6. Geology.
7. Veterinary Hygiene.
8. Agricultural Entomology.
9. Economic Science as applied to Agriculture.
10. A course in one of the following :—
    (*a*) Forestry.
    (*b*) Experimental Physics.
    (*c*) Engineering.
11. Engineering Field Work.

IX. (1) There shall be a First Science Examination in the three following subjects—viz., (1) Mathematics, or Biology (*i.e.*, Zoology and Botany) ; (2) Natural Philosophy ; (3) Chemistry.

(2) The examination in all these subjects shall be the same as the examination in these subjects for the degree of Bachelor of Science, under the provisions of Ordinance, No. 12 [General, No. 7—Regulations for Degrees in Science].

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

X. (1) There shall be a Final Science Examination in the remaining subjects (4 to 11 inclusive) specified in Section VIII. hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the whole of the subjects comprised in the First Science Examination, and have attended the required courses in the subjects professed.

XI. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XII. A candidate for the degree of Bachelor of Science in Agriculture shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

GENERAL.

XIII. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the degree of Bachelor of Science in Agriculture, on payment of the fees required.

XIV. A student who, at the time when this Ordinance shall come into operation, shall have completed a part of his course of study with a view to graduation in Science in Agriculture in the University of Edinburgh, under regulations in force at the time therein, and shall thereafter complete his course of study and pass the necessary examinations in conformity with such regulations, or with the provisions of this Ordinance, may become a candidate for the degree of Bachelor of Science in Agriculture.

XV. The degree of Bachelor of Science in Agriculture shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum.*

XVI. This Ordinance shall come into force from and after the date on which it is approved by Her Majesty in Council.

In witness whereof these presents are sealed with the seal of the Commission.

L. S.

A. S. KINNEAR,
Chairman.

GENERAL INDEX.

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